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# PUBLICATIONS OF THE UNITED STATES PATENT ASSOCIATION

A  
DEFENCE  
OF THE  
U.S. PATENT SYSTEM  
BY  
J.S. PERRY, ALBANY.

OUR COUNTRY'S DEBT  
TO  
PATENTS  
BY  
H. HOWSON, PHILADELPHIA









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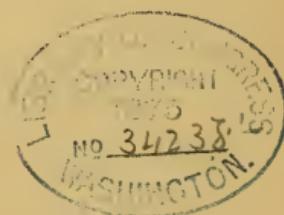
*VOLUME I.*

A DEFENCE OF THE UNITED STATES PATENT SYSTEM.

By JOHN S. PERRY, ALBANY.

OUR COUNTRY'S DEBT TO PATENTS.

By H. HOWSON, PHILADELPHIA.



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## P R E F A C E.

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THE UNITED STATES PATENT ASSOCIATION is a society which grew out of the Patent Convention assembled in Washington, Jan. 15, 1874. The object of that convention was to discuss and pass upon certain propositions enunciated by the Patent Congress held at Vienna in the summer of 1873, in relation to the principles which should govern the protection of the rights of inventors in all countries. The Vienna propositions looked to a gradual unification of the patent systems of civilized nations; and the National Committee appointed by the congress were enjoined to "use all their influence that the principles adopted be made known as widely as possible, and carried into practice;" and were, moreover, authorized "to endeavor to bring about an exchange of opinions on the subject, and to call, from time to time, meetings and conferences of the friends of patent protection." The Patent Convention, finding that the time which could be allotted to such a meeting would not be sufficient for full discussion or intelligent action on all the questions relating to the protection of the rights of inventors, on which an expression of opinion was desired, determined that it would immediately proceed to organize a permanent society, to be known as the UNITED STATES PATENT ASSOCIATION, to which should be referred the various questions submitted to the Convention, and which should be charged with the duty of taking the necessary measures to bring about intelligent and united action by the inventors of the country to secure better protection of their rights, by developing a healthy public sentiment on the subject; by collecting and

disseminating information relating to the effect of patents upon the industry and productive force of nations; by urging appropriate legislation upon Congress, especially with reference to simplifying and cheapening the legal remedies for infringements upon the rights of inventors; by co-operating in the movement now making in Europe for the establishment of more just and equitable patent systems abroad; and, generally, to take such action as might be deemed most for the advantage of inventors and of all who are interested in patent property.

The Association was accordingly organized Jan. 16, 1874, by the adoption of a Constitution and By-Laws, reported by a committee, and approved by the Convention, and by the election of a Board of Officers and Directors representing all sections of the country, and every form of interest in inventions and patents.

The second article of the Constitution declares that the "Association is not formed as a combination against any class or interest, nor shall the influence or means of this Association be used to aid any individual enterprise, or to promote any personal scheme." The varied character of the Board of Government, consisting as it does of men from all the different quarters of the country, and of different professions, is a guaranty of the good faith of this declaration.

Provision has been made for the organization of State Associations as branches of the National body, the presiding officers of such branches to be, *ex officio*, vice-presidents of the National Association.

One of the most important duties of the Association is the collection and publication of statistical information in reference to the relations of patents to the manufacturing and productive industry of the United States, with a view to demonstrate the effect of a liberal patent system in developing the prosperity of nations. This branch of its operations will be of special importance in reference to its effect upon sentiment abroad, in encouraging the existing tendency of European opinion in favor of the adoption of a patent system closely assimilated to our own.

It will, also, it is hoped, tend to remove the barrier of ignorance, which has hitherto prevented property in invention from being an object of general interest and solicitude, and to hasten the time when invention, and the rights flowing from it, shall be recognized and fostered, not in theory only, but in practice, as of the highest public concern.

The following essays, on subjects of the deepest importance to inventors and patentees, in reference to legislation, which has been proposed and advocated in Congress, looking to a disastrous abridgment of the protection afforded by existing laws to rights in patent property, are offered by the Board of Government of the Patent Association to all who are interested in the questions to which they relate, as a fulfilment of that part of the duty of the Association which consists in "collecting and disseminating information relating to the effects of patents upon the industry and productive force of nations," with a view to the development of a healthy public sentiment on the subject.

CHARLES F. STANSBURY,  
*Secretary of the U. S. Patent Association.*



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A DEFENCE  
OF THE  
PATENT SYSTEM OF THE UNITED  
STATES.

BEING A REPLY TO THE SPEECH OF HON. HENRY B. SAYLER OF INDIANA,  
DELIVERED IN THE HOUSE OF REPRESENTATIVES  
ON THE 7TH OF FEBRUARY, 1874.

BY  
JOHN S. PERRY,  
OF ALBANY, N.Y.



## A DEFENCE OF THE PATENT SYSTEM OF THE UNITED STATES.

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IT seems scarcely necessary, in view of the enlightenment of the nineteenth century, to defend the Patent System in general, and that of the United States in particular.

Since, however, an honorable Representative on the floor of Congress has lately endeavored to bring into disfavor the existing Patent Laws,\* a brief statement of some of the arguments in their favor may not be considered uncalled for.

In prosecuting this design, I shall confine myself to two heads.

*First*, A review of some of

the principles upon which Patent Law is founded.

*Second*, A reply in detail to the speech of Mr. Sayler, in which, I trust, the specious nature of his arguments will be made apparent.

It will not be disputed, that man has a right of property in that upon which he bestows labor; and that, if this ownership be taken from him, either by violence, or by the absence of law protecting his rights, a great incentive to manly exertion is removed.

From an early date in the history of nations, this principle has been recognized. When the barbarous has merged into the civilized state, and a solid

\* See speech of Mr. Sayler of Indiana in Congressional Record, Feb. 8, 1874, p. 12, in favor of Bill No. 1,392.

form of government been established, laws looking to the protection of inventors have in most cases been speedily enacted. It is true these laws were often crude, and, on that account, frequently inoperative, nevertheless the fact of their existence proved their necessity as well as their importance.

In the history of the United States, "patent protection" is coincident with our existence as an independent nation. The Patent Law, as it now stands in the United States, rests on the statutes of April 10, 1790, February 21, 1793, and April 17, 1800. These statutes have, however, been modified at various times, as, for instance, in 1836, and again in 1870, when new laws were passed.

The friends of our Patent System acknowledge that it is not a perfect one, and are making strenuous efforts to remedy its defects; yet as it stands, with all its imperfections, it has done much to advance civilization, and increase the wealth and power of our country.

An examination will show that the growth and prosperity of almost every department of industry has been largely dependent upon patented inventions, of which the steam-engine, the electric telegraph, the mower and reaper, and the sewing-machine will at once occur to the reader as notable examples.

Take, however, one illustration out of many that might be adduced, drawn from the history of agriculture. The art of husbandry was at a low ebb in England until the fourteenth century, when it began to be practised with considerable success in the midland and south-western parts of the country; yet it does not appear to have been cultivated as a science, until the latter end of the sixteenth century; the first work on agriculture in the English language appearing in 1534. Still, little improvement was made in the theories then advanced, for upwards of a hundred years, when Sir Hugh Platt discovered and brought into use, *under a sort*

of *patent*, several kinds of manures for fertilizing and restoring exhausted soils.

Stimulated by this beginning, agriculture received a new impulse ; and in 1793 a “Board of Agriculture” was established by an act of parliament at the suggestion of Sir John Sinclair, who was its first president.

Through the influence of this board, a great number of agricultural societies immediately sprang into existence, both in England and the United States, which, by their publications and discussions, stimulated a spirit of emulation, and have produced, from time to time, various inventions and improvements in the implements with which the different operations of husbandry are performed.

Instead of the cumbersome and uncouth implement with which the ground was formerly prepared for the reception of the seed, the farmer now uses the light and graceful plough. Where once he scattered his wheat unevenly and wastefully

by hand, and covered it with a hoe or a bush, he now employs the drill, which, with economy and great exactness, ploughs the furrow, drops the seed, and at the same time covers it to a uniform depth.

In the primitive cultivation of cotton, the seed was separated from the boll by hand,—a method so tedious and expensive, that little or no profit could be realized ; while by the use of the “saw-gin,” and other inventions, now universally employed, the product has grown from that of a garden-plant at the end of the Revolutionary War, to an amount exceeding that produced in all other countries.

In 1784 eight bags shipped to England were seized, on the ground that so much cotton could not be produced in the United States ; whereas at the present time we have an annual product of four or five millions of bales.

It is safe to affirm, that were it not for the wonderful appliances for sowing, reaping, and harvesting, which are now

in common use, and which are due to the fostering care of the Patent System, the immense cotton and grain fields of our country would lie, to a great extent, still uncultivated. Had the old method been retained, the West of to-day would be little in advance of its condition fifty years ago; and we may fairly assume, that without the vast crops of cotton and of cereals which are yearly exported, and which, at no distant day, with products of minor value, will secure to us the "balance of trade," our present development and prosperity would become bankruptcy, both national and individual; immigration (that public blessing) would cease, commerce would be crippled, our manufacturing industry decay, and we recede as a nation, until we stood in the background with those which have failed to appreciate, and therefore to foster and protect, the genius, skill, and inventive power of their people.

We have not taken into ac-

count the amelioration of the masses, which the inventions of the age have effected, by giving easier and more lucrative employment to thousands, who would otherwise delve like the serfs in unprogressive countries.

Since the introduction of labor-saving machinery, paradoxical as it may appear, the demand for labor in every department of activity has greatly increased; and we may depend that this will continue to be the uniform rule. Inventions produce wealth in proportion to their merits: the increase of wealth gives the power to employ more labor, as well as labor of a higher order.

A Patent Law compels the inventor, if he would avail himself of its benefits, to make his inventions known by spreading out a minute description of the same upon the public records of the office, and, if he would reap pecuniary advantage, to publish them to the world, thereby giving an opportunity for their general adoption.

In Burrow's report, Mr. Jus-

tice Yates says, " that the *mere labor and study* of the inventor will establish no property in the invention, and no right to exclude others from making the same instrument."

The Patent Law thus secures to the public a direct benefit from the invention.

Nor, again, do patents, as Mr. Sayler seems to suppose, create monopolies. These rewards have never been considered *special favors*, like the monopolies granted by the British crown to favorites, anterior to the seventeenth century, for the sale of articles of prime necessity, but rather as the payment of just debts due from the public for benefits conferred, as well as an incentive to further effort.

In no sense can a patent be considered an injustice to the public, because it takes nothing from them which they had ever before possessed: on the contrary, it gives them something new, some increased facility, some more advantageous method, or a cheaper substitute for a rare and costly article.

The public are under no compulsion and no restraint. If they accept the patented article, it is because they find it for their advantage to do so, and in spite of the royalties to the inventor.

Who, for example, is content with a daguerrotype, when he can procure a photograph?

Who, if the occasion warrants it, will communicate by letter, when he can use the telegraph?

Or what farmer of any means will employ twenty "hands" with the old-fashioned scythe, when one man with two horses and a machine can accomplish more and better work?

Or what woman will "stitch, stitch, stitch," day and night, when, with a machine, the labor of a score of workers can be accomplished?

The road to the great inventions of modern times, though rough and thorny, was equally open to Mr. Sayler and to all of us: that we did not go forth and secure some of these prizes is surely our own fault or misfortune, the penalty for

which should not be visited upon those who have labored, perhaps for years, and in obscurity and poverty, in devising and perfecting inventions which were to bless the world.

Another prevalent idea, and one often urged against the Patent System, is, that manufacturers are injured by the protection thus afforded for a limited time to meritorious inventions.

It is believed that a little investigation will show, that all energetic and enterprising manufacturers are greatly benefited: those of the other class are not of much account, and, as they would reap little profit from any system, it would scarcely be wise to disturb the present relation of things in their favor.

In reply to a Circular sent out in 1873 by the Secretary of State to the leading manufacturers of the country, containing a series of inquiries as to the influence of the Patent System upon our manufacturing interests, the responses were uniformly, that it was of incalculable advantage; and it is

believed that this must be the opinion of all who give the subject a fair and unprejudiced examination.

It will readily be seen, that, in any industry, the consumption would be largely increased by whatever added to the variety of the products, or made them more desirable.

From the foregoing remarks, we deduce that the Patent System is in a great measure a gauge of civilization. The aborigines of this country were not able to avail themselves of the products which the soil of America so lavishly brings forth, simply from the lack of proper implements. Even in the Colonial period, as has been recently remarked by Mr. Edward H. Knight in his excellent paper on mechanical progress, "The people were generally engaged in husbandry, lumbering, trading, hunting, and fishing. The exports were grain, meat, naval stores, tobacco, and pelts. But few mechanical arts were carried on systematically, except ship-building. . . . The hand-card,

the spinning-wheel, and the loom, constituted almost always the furnishing of houses. . . . Carts, ploughs, and hoes were made by the country mechanic of such material as he could procure, little metal being used in either. Strips of iron hammered out of old horseshoes were the facings of the wooden mouldboards of ploughs."

In proportion as the Patent System has stimulated and developed inventions among our people, have our mechanical arts risen in importance, until our power in this direction has become recognized throughout the world.

Having thus shown, in a general way, the influence of the Patent System, and some of the arguments that may be adduced in its favor, I will proceed to give a few examples in detail, showing that the chief assumptions upon which Mr. Sayler relies to bring it into disrepute rest upon a poor foundation ; or, in other words, that his premises are not in accordance with the facts. He says,—

"In encouraging and strengthening the Patent System, I do not wish to warm in my bosom the serpent which will turn on me, and sting me to death, that will paralyze the hand which has supplied it with the means of life."

The chief burden of Mr. Sayler's speech, is, that an inordinate profit is made upon patented articles. On rubber goods, he states the profit upon the capital invested to be fifty-nine per cent: on sewing-machines, sixty-seven per cent; and on agricultural implements, fifty-two per cent. He further makes the astounding assertion, that the average *net* profit upon the capital employed in the entire manufacturing business of the country, patented or otherwise, is about forty per cent.

Our manufacturers will smile on reading this statement, and wonder at the credulity which permitted it to appear in print. I venture to say there is not one of them who will not bear me out in the assertion, that upon the general business of manu-

facturing, including patented articles, the net profits upon the capital employed will range from zero to twenty per cent, and that, upon an average, they will not exceed ten per cent.

Immediately after the delivery of Mr. Sayler's speech, I put myself in communication with a number of prominent and reputable manufacturers, with a view of ascertaining how much of truth or error there was in it. The results of this investigation will now be presented.

#### STATEMENT NO. I.

[From a retired woollen manufacturer in Massachusetts.]

"I have taken some pains to inform myself in regard to the questions proposed, and will try to give such information as you call for. Of course, we can only approximate the average; for, in the same class of manufacturing, there is a great

difference in the proportion of labor, stock, and sundries in different mills, owing to the various styles of goods made.

"Thus in woollen mills, labor varies from twelve and a half to twenty-five per cent of the net cost: so of the item of sundries. My experience and observation, confirmed by the testimony of manufacturers of all classes, lead to the conclusion, that the average of manufacturing throughout New England does not pay more than ten per cent upon the capital invested.

"Woollen manufacturers, as a class, have not kept their capital good, to say nothing about interest, for the last eight years. *This I know.*

"The percentage of cost for stock, labor, and sundries, with the percentage of profit on the net cost of production, taking one year with another, is found to be about as follows:—

#### WOOLLEN GOODS.

Stock . . . . .	68 per cent.
Labor . . . . .	20 "
Sundries . . . . .	<u>12</u> "
	100 "

Estimated profits 10 to 12 per cent.

Mr. Sayler's statement of profits 32 per cent.

## COTTON GOODS.

Stock . . . . .	53	per cent.
Labor . . . . .	33	"
Sundries . . . . .	14	"
	100	"

Estimated profit 8 to 10 per cent.

Mr. Sayler's statement of profit 18 per cent.

## SHOES.

Stock . . . . .	63	per cent.
Labor . . . . .	22	"
Sundries . . . . .	15	"
	100	"

Estimated profit 5 to 10 per cent.

## LEATHER.

Stock . . . . .	65	per cent.
Labor . . . . .	16	"
Sundries . . . . .	19	"
	100	"

Estimated profit 12 to 15 per cent."

Mr. Sayler's statement 35 per cent.

## STATEMENT NO. 2.

[From an experienced and extensive manufacturer of pig iron in the Lehigh Valley, Penn.]

"The assumption that material and labor alone make up the cost of manufacture is manifestly a most unjust one. This is particularly true of pig iron, where numberless acci-

dents of all kinds occur, not only materially increasing the cost, but lessening the price, as an inferior grade is the inevitable result.

"The average cost of pig iron produced in the Lehigh Valley during the six months ending Dec. 31, 1873, was about \$32.00 per ton at the furnace, made up as follows:—

Stock . . . . .	76 $\frac{3}{10}$	per cent.
Labor . . . . .	14	"
Sundries . . . . .	9 $\frac{7}{10}$	"
	<hr/>	
	100	"

" Now if, to this sum, you add the freight to tide-water, the selling expenses, taxes, losses, &c., you will have a cost of not less than \$36.00.

" The statement will then stand as follows:—

Stock . . . . .	68 $\frac{1}{10}$	per cent.
Labor . . . . .	12 $\frac{5}{10}$	"
Sundries . . . . .	19 $\frac{4}{10}$	"
	<hr/>	
	100	"

NOTE.—The nominal price of pig iron last year was \$40.00, \$43.00, and \$45.00 for Nos. 3, 2, and 1 respectively; but large quantities were sold late in the season at \$30.00 to \$35.00, and some below these figures: the average, therefore, could not safely be put above \$40.00, which would give a profit of eleven per cent upon the cost.

Mr. Sayler's statement of profits is twenty per cent.

It cannot be doubted, that, in the manufacture and sale of pig iron during the years 1873 and 1874, *the balance has been upon the wrong side.*

#### STATEMENT NO. 3.

[From a manufacturer of finely-finished machinery, much of which is patented.]

" We have much more labor in proportion to the material

than some others, the fine fitting being expensive.

" We manufacture to the amount of our capital annually. We have looked over one year with the following results:—

Stock . . . . .	19	per cent.
Labor . . . . .	51	"
Sundries . . . . .	30	"
	<hr/>	
	100	"

" If congressmen would show the amount of money lost in manufacturing, and offset it

against the few who do make money, it would be more just.

## STATEMENT NO. 4.

[From one of the largest and most successful manufacturers of mowing and reaping machines.]

"The statement of Mr. Sayler, that manufacturers of agricultural implements realize fifty-two per cent of profit, is too absurd for any correction.

"I have been connected with this company since 1852, and am well posted as to the business.

"There are some 90,000 mowing and reaping machines manufactured per year in the United States, of which number, probably one-seventh are exported.

"Of this 90,000, this company made, last year (1873), 20,715, or twenty-three per cent of the whole number.

"The capital of this company is \$1,000,000.

"The competition in this line between the makers of different types, each of whom is protected by his own special patents, is severe, and brings prices down where there can be no great amount of extortion to the farmer.

"Our company is well organ-

ized, and manufactures on a large scale, and, of course, can furnish machines cheaper than small makers; but the results show, *that we cannot divide over ten to fifteen per cent on our capital.*

"We have had to purchase patents on machines to protect ourselves; but this would not amount to one per cent of our outlay.

"We could not sustain our establishment, if every blacksmith and small machinist at every cross-road could make our type of machines, as their neighbors would take machines of them.

"But the inventor of this type has furnished us with the product of his own brain, by a lifetime of labor and study.

"By looking at the number of machines this company annually turn out, you will see that there would be more clean money to them in receiving \$10 royalty on each, than in manufacturing. But this is based upon the assumption that some one would put this number on the market, which

would not and could not be done ; for no man could make this type of mower and reaper, or any other, and pay \$10 royalty, and live."

*Comment.* — In view of the foregoing statement, if this company make an annual profit of ten per cent upon their capital of \$1,000,000, it is \$100,000, or on 20,715 machines, as made in 1873, an average of \$4.83 each.

With a profit of twelve and a half per cent, the average is \$6.04 each : with a profit of fifteen per cent, the average is \$7.25 each.

Mr. Sayler's statement of profit on all kinds of agricultural implements, patented or otherwise, is fifty-two per cent.

His impracticable proposal, "to pay a royalty to the owner of a patent right of ten per cent upon the market value of the article manufactured," would have the effect of increasing the price of nearly

every patented article now upon the market. It would double the royalty demanded upon sewing-machines by the combined interest which controls a score of patents upon the same. And suppose, for a moment, that these twenty patents, more or less, were held by as many different parties, who, in the name of constitutional law, would have the right or the ability to decide with justice what proportion should be paid to each ?

In the construction of mowers and reapers, as in other things, the patented inventions embodied are numerous, and of different values : could any court of arbitration adjust them with any prospect of doing justice to the patentees, the manufacturer, and the public ?

In a machine of which the "market value" was, say, \$100, one patented invention might command a royalty of a dollar, or one-tenth of one per cent ; another, of greater importance, might be worth five dollars, or five per cent ; the shades of value varying at different times,

according to the necessities, the fancy, or the caprice of the public, or the state of the art at the time.

This question, therefore, like all others having reference to prices or values, must be regulated by the higher power of demand and supply, the ultimate arbiter of all such questions, irrespective of legal enactments from whatever source.

In respect to agricultural implements, Mr. Sayler uses the following extraordinary language:—

“The capital employed in the manufacture of these in 1870, as shown by the census, was \$34,834,600. They paid a little over \$12,000,000 for wages; they paid nearly \$21,500,000 for materials; and their net profits on the basis indicated was fifty-two per cent on all the agricultural implements in the country.

“The man who pays \$150 for his reaper pays \$52 as a royalty to-day to the holders of patent rights. . . . It is fifty-two per cent, on every dollar invested in the manufacture

of agricultural implements and machinery, clear profit. . . . In any way you may look at it, you will find there is a duplication every two years. You may burn up and utterly destroy every agricultural implement manufacturing establishment in the country, and they will yet make four per cent on the invested amount. \$35,000,000 capital invested in agricultural implements doubles itself every two years, and leaves a net profit besides. So it goes on, and on, and on, until, when the ordinary life of a patent right shall have expired, more than \$400,000,000 has been made, or nearly made, by the original \$35,000,000.”

The tales of “The Arabian Nights” are as worthy of belief as this statement. I will venture the assertion, and for its truth I refer to every manufacturer of agricultural implements in the land, that, taking one year with another, the net profits upon the entire product of the country do not average over ten per cent, nor

the royalties to the holders of Patents, over two per cent, upon the value of the patented articles.

#### STATEMENT NO 5.

[From one of the largest and most successful manufacturers of sewing-machines.]

“The sewing-machine business was begun in the United States in the year 1850.

“Out of some ten companies and firms who engaged in the business during the succeeding five years, only three are now in existence. The others failed,—some because their machines had no merit; but most, because the sales were so limited as to make the business undesirable. The prejudice against the introduction of these machines which the pioneers of the business encountered was probably greater than that attending the introduction of any other labor-saving instrument.

“From the time sewing-machines were first introduced, large expenditures have been made by the leading manufacturers in order to popularize

their use; and in no section of the country has this business been made to yield a profit, until after those seeking to establish it had first lost large sums in their undertakings.

“In the year 1856, the owners of leading patents united in an arrangement for the purpose of more effectually protecting the business against infringers, and for the purpose of granting licenses under the patents to others who desired to engage in the business.

“Prices at which machines were then sold were more than double what they now are. The license-fee was fixed at \$15 per machine. In the year 1860, this license was reduced to \$7 per machine; and at this rate twelve additional licenses to manufacture were granted. In 1868 it was again reduced to \$5 per machine, and lastly, in 1870, to \$3 per machine; which sum is the royalty now paid by all licensees making double-thread sewing-machines. No agreement ever existed between the companies as to the prices at which machines should

be sold. Each company could, at any time, regulate prices as it chose.

“The number of companies and firms now engaged in the sewing-machine business is thirty-one.

“The amount of capital employed in the United States by these thirty-one manufacturers is not less than (\$40,000,000) *forty millions of dollars*. This capital is employed as follows:—

“First, In the ownership of patents, and in organizing and perfecting a marketable machine.

“Second, In acquiring proper manufacturing facilities, among which is included very large expenditures for special tools, and machinery which is only applicable to the manufacture of the particular machine for which it is designed.

“Third, In the purchase and payment of the necessary material and labor employed in the various departments of the manufactory.

“Fourth, In creating and maintaining the selling organi-

zation necessary to market the machines, to instruct purchasers in their use, and to keep them in order.

“Fifth, In extending long credits to purchasers, and in the employment of a large force for making collections on the machines sold on the instalment plan.

“The organizations for making and selling sewing-machines are so dependent upon each other, that it has been found necessary that the parties making must also control and supervise the sales. Several attempts have been made by manufacturers to dispose of the entire production of their manufactories to other parties, who would undertake the introduction and sale of their machines; but each attempt in this direction has proved a failure.

“The success or failure of any sewing-machine manufacturer is dependent on the manner in which his machine is marketed; for although large sales may, for a time, be made, unless the necessary expenses

are incurred to properly instruct purchasers in using machines, and in maintaining a force of agents to adjust, repair, and see that machines sold are kept in successful operation, the reputation of the machine will suffer, and sales will diminish proportionately.

"If the manufacturer of sewing-machines could sell his machine, and the right under his patents to use it, without the additional expenses referred to, he could well afford to accept from thirty-five to forty per cent of the price now charged.

"Suppose the manufacturer of the little instrument used for transmitting telegraphic messages, which is now sold for about \$15, should be compelled to support an organization for the purpose of instructing parties in its use, and keeping it in order, would \$150, or even \$200, be an unreasonable price at which to sell it? Or suppose the manufacturer of a piano, which would otherwise sell for \$500, were compelled to do the same thing,

would \$1,500, or even \$2,000, be an unreasonable charge?"

"The profits of the sewing-machine business are not to be arrived at by estimating the difference between the cost of making a sewing-machine, and the price at which it is sold. By far the largest item of cost to the manufacturer is the cost of selling machines, and maintaining the necessary organization for keeping them in successful operation. There is not a sewing-machine manufacturer in the United States who would not be glad to enter into a contract with any responsible company, firm, or individual, for the sale of the entire production of their manufactory at from sixty to sixty-five per cent discount from the published prices of their respective machines.

"In the year 1870 a contract was entered into by one of the largest sewing-machine companies in the country, for supplying as many sewing-machines (exclusive of stands or tables) as another company, which was organized for the

purpose of marketing this machine, might require, at \$14 each. The retail price of this machine was fixed at \$70; and the last-named company, after having displayed considerable ability in marketing over 100,000 of these machines, are to-day unable to pay their debts; and their business is being managed by a committee of their creditors."

In contrast with this plain statement of facts, we have the following crude opinion of Mr. Sayler, based upon the census returns, which the superintendent, as we shall see later, has characterized as being "*entirely untrustworthy and delusive*;" viz., —

"It takes but a fraction over seventeen months for the sewing-machine capital of the country to pay for all the labor it employs, all the material it uses, and all the capital that is engaged in the business.

"Every two years, you might burn down and utterly destroy every sewing-machine establishment in the country, and

they would yet have in their pockets all that they had paid for wages and material, all their capital, and in the neighborhood of twenty per cent besides. . . .

"The profit upon a \$60 machine, as shown by the census of 1870, is \$24.

"The entire number sold in the United States, up to the present time, reaches in the neighborhood of 3,500,000; and the aggregate profit, on this basis, upon the sewing-machines throughout the land, amounts to \$84,250,000, the great proportion of which comes from the toilers of the midnight lamp,—from those who are compelled to 'stitch, stitch, stitch,' for a meagre subsistence, while the patent holders are insisting that \$24 out of every \$60 that they invest in sewing-machines shall go to them as profit. . . .

"Taking these two items of sewing-machines and agricultural implements, and the aggregate profit of all that have been sold, since their introduction, up to the present time, on sewing-machines, and,

up to 1870, on agricultural implements, is over \$200,000,000 of actual profit, clear cut, — thick cut it is true, but clear cut."

Where, it may be asked, are those two hundred millionaires who are indebted to the manufacture and sale of sewing-machines and agricultural implements for their great wealth? Can Mr. Sayler point out even five? We cannot.

In the new law which he proposes, the royalty to a single patentee upon sewing-machines the market-value of which is \$60, would be \$6. We have seen that the association which controls the leading Patents in this branch of industry (a score of them, more or less) are willing to license Mr. Sayler, or any other responsible person or company, to manufacture sewing-machines of the most approved patterns, for the small royalty of \$3 each, or five per cent on a \$60 machine.

If the present manufacturers are such extortioners, and so

regardless of the interests of the poor, and if the profits in the business are so attractive, why do not some philanthropic and enterprising capitalists embark in it? There is no monopoly: the road is open to any who will pay the small royalty demanded.

In respect to the statement, that "a greater portion of these millions comes from the toilers by the midnight lamp," a little investigation will show, that a very large part of this manufacture is absorbed by persons who are above want, by manufacturers, and by foreign nations.

#### STATEMENT NO. 6.

"In the business of manufacturing stoves, in which I have been engaged for more than thirty years, it has been my custom to make up annually statistical accounts of the cost in great detail.

"A statement of this cost, modified to meet the average condition of stove-founders, I submitted to the National Association of Stove Manufactur-

ers, at their first meeting, held in the city of New York three years since.

"It has been universally indorsed by the trade as being substantially correct.

"Detailed statements of this character in respect to most

other branches of manufacture would be far more reliable as a basis for action than the census returns, which the superintendent characterizes as being 'wholly worthless,' or the opinions of inexperienced theorists."

The following is a copy of the statement referred to.

*Estimated Cost of manufacturing 3,000 net Tons of Stoves of an Ordinary Quality in one Foundry, and in one Cupola, running 273 Days, the Product averaging 11 Tons per Day.*

Iron at \$40.00. If 2,120 pounds are realized from a gross ton, the cost per net ton will be . . . . .	\$37.73	6-10
Coal for melting 3,333 pounds of iron, the amount required to make 2,000 pounds of cleaned castings, including waste, 20 pounds per hundred, or 666 6-10 pounds, cost \$7.17 per gross ton, or 32 cents per hundred net . . . . .	2.13	3-10
Coal for engine, 1,400 pounds per day, cost \$6.50 per gross ton, or 29 cents per hundred net . . . . .	\$4.06	.37
Coal used in 22 heating stoves, 60 days, 60 pounds each, 1,320 pounds per day, 79,200 pounds; cost \$6.50 per gross ton, or 29 cents per hundred net . . . . .	229.68	.07 7-10
Cupola men, and men for breaking and wheeling iron and coal:		
One man breaking and wheeling . . . . .	\$2.50	
One man breaking and wheeling . . . . .	2.00	
One man melting . . . . .	2.50	
Three laborers melting, at \$2.00 . . . . .	6.00	
	\$13.00	1.18 2-10
Wood for cupola, $\frac{1}{4}$ of a cord at \$7.00 . . . . .		.15 9-10
Moulding . . . . .		27.50
Foreman of moulding shop . . . . .	2,000.00	.66 7-10
Mounting . . . . .		7.50
<i>Amount carried forward,</i>		\$77.32 4-10

<i>Amount brought forward,</i>				
Foreman of mounting shop . . . . .		\$2,000.00	.66	7-10
Engineer, \$2.75 per day, 300 days . . . . .		825.00	.27	5-10
Oil and waste . . . . .		75.00	.02	5-10
Moulding sand, 1½ ton at \$2.00 . . . . .		\$3.00		
Fire sand and clay . . . . .	.20			
Facing, 2½ bbls. at \$3.50 . . . . .		3.20	.29	1-10
Wheeling, cleaning, and delivering castings at the racks . . . . .		7.87½	.71	6-10
Weighing, examining, and piling castings . . . . .		2.10		
General labor:—		.88	8-10	
Two men carrying flasks, \$1.87½ . . . . .		\$3.75		
One man carrying patterns . . . . .		1.87½		
Two men at cinder mills, \$1.87½ . . . . .		3.75		
One man cleaning gangways . . . . .		1.87½		
			11.25	1.02 3-10
Clerks at foundry, and labor, hoisting, piling, and shipping:—				
One clerk . . . . .		\$1,200.00		
One clerk . . . . .		800.00		
One clerk . . . . .		500.00		
Five laborers, \$600.00 each. . . . .		3,000.00		
Watchman, 365 days, at \$2.00 per day . . . . .			\$5,500.00	1.83 3-10
Files . . . . .		\$1,500.00	730.00	.24 3-10
Tools . . . . .		550.00		
Grindstones . . . . .		100.00		
Emery-wheels . . . . .		300.00		
Beltng . . . . .		50.00		
			2,500.00	.83 3-10
Rods, bolts, wire, malleable iron, scrapers, cement, wood handles, &c. . . . .				3.30
Broken castings, daily, 273 days, 300 lbs. per day . . . . .		81,900 lbs.		
Obsolete castings discarded at the end of the year . . . . .		50,000 "		
At 3 cents per pound . . . . .		131,900	\$3,957.00	1.31 9-10
<i>Amount carried forward,</i>				\$90.83 7-10

<i>Amount brought forward,</i>		<b>\$90.83 7-10</b>
Repairs of buildings and machinery . . . . .	\$2,000.00	.66 7-10
Repairs of iron patterns :—		
Moulding . . . . .	\$1.00	
Two fitters . . . . .	6.00	
One scraper . . . . .	2.50	
	<hr/>	
	\$9.50 300 days	2,850.00
Repairs of flasks, and keeping the stock good :—		.95
Four men, \$3.00—\$12.00 . . . 300 days	3,600.00	1.20
Lumber, nails, screws, &c., for repairs of flasks, and for new flasks to keep the old stock good,	1,000.00	.33 3-10
Cartage of dirt, and sundry cartages not charged, \$2.20 per day . . . . .		.20
Rent of foundry and warehouse, 10 per cent interest on \$80,000 . . . . .	\$8,000.00	
Taxes on foundry and warehouse . . . . .	800.00	
	<hr/>	
	\$8,800.00	2.93 3-10
Insurance on machinery and stock, 1½ per cent on \$75,000 . . . . .	1,125.00	.37 5-10
Gas and oil . . . . .	700.00	.23 4-10
Stationery and books . . . . .	300.00	.10
New wood and iron patterns and flasks . . . . .	9,000.00	3.00
Sundries . . . . .	1,500.00	.50
	<hr/>	
	\$101.33	
Store expenses, selling, &c. :—		
Rent and taxes on store . . . . .	\$1,500.00	60
Clerks . . . . .	5,000.00	1.66 7-10
Two travellers . . . . .	3,500.00	1.16 7-10
Expenses of same . . . . .	3,000.00	1.00
Porter . . . . .	600.00	.20
Gas . . . . .	300.00	.10
Advertising, circulars, posters, and other printing, woodcuts and elec- trotypes . . . . .	8,000.00	2.66 7-10
	<hr/>	
<i>Amount carried forward,</i>		<b>\$7.60 1-10 \$101.32 9-10</b>

<i>Amount brought forward,</i>		\$7.60	1-10	\$101.32	9-10
Stationery . . . . .	\$600.00	.20			
Postage . . . . .	1,500.00	.50			
Interest on \$200,000 capital at 7 per cent . . . . .	14,000.00	4.66	7-10		
Discount for cash, five per cent on . . . . .	100,000.00	1.66	7-10		
Allowances, amount of sales, say \$420,000, at \$140 per ton; 1,400 customers, at, say, \$2.00 each . . . . .	2,800.00	.93	3-10		
Bad debt, $1\frac{1}{2}$ per cent on \$420,000 . . . . .	6,300.00	2.10			
Sundry freights, expressage, and telegraphing during 313 days, at \$2 per day . . . . .	626.00	.20	9-10		
Legal costs . . . . .	500.00	.16	6-10		
Sundries . . . . .	2,481.00	.82	7-10		
				18.87	1-10
				\$120.00	

From this the following results are obtained:—

Stock . . . . .	\$45.14	$37\frac{8}{10}$ per cent.
Labor . . . . .	43.76	$36\frac{5}{10}$ "
Tools and Patterns . . . . .	6.30	$5\frac{2}{10}$ "
Sundries . . . . .	24.80	$20\frac{7}{10}$ "
	<u>\$120.00</u>	<u>100</u>

Estimated average profits 10 to 15 per cent.

A profit of twelve and a half per cent on the cost, \$120.00 per ton, would give an average price for the product, of \$135.00.

Upon Mr. Sayler's plan of estimating the cost of manufactured articles, as being composed of material and labor only, the net profit upon this

branch of industry would be fifty-one and eight-tenths per cent, instead of ten to fifteen per cent; and, for the correctness of this statement, I refer to the stove manufacturers of our country.

For the purpose of ascertaining, to some extent, the sentiments of persons familiar

with the subject, I lately addressed a series of questions to several who are engaged respectively in different pursuits, relative to the effect of our Patent System, both upon inventors, and upon the public, and what would be the probable effect, if the bill proposed by Mr. Sayler should become a law.

The first inquiry was as follows:—

*1. Name of valuable inventions for which the inventors have not made money, directly or indirectly; also cases in which they have realized a handsome income on the same, and expended it on further inventions; also name of any inventors who have been ruined in producing valuable inventions.*

I quote the following replies:—

[From an Attorney.]

“There are numerous cases in which inventors have failed to receive any considerable remuneration for valuable inventions, and others in which they have received more or less, but expended it in further invention.

“But probably more striking

examples than any which now occur to me will be furnished by others to whom your Circular is addressed. Among the cases, however, where inventors have been ruined in producing valuable inventions, I cannot forbear to mention that of Elisha T. Kneeland, the inventor of the machine for making lead pipe, who, just as he had attained success, was obliged to sell his entire interest in the machine, and also in the invention, to pay the debts he had contracted in its production.”

[From a Manufacturer.]

“I had some fifteen Patents in my own right, which, in preparing to manufacture the goods, together with the great expense and trouble in introducing them to the market, have cost me, in the preparation of new tools and machines, and other incidental matters, more money than I ever have, or probably ever shall, throughout the duration of said Patents, realize as profits on the same.

"I am now in quest of new Patents, both here and in Europe, for new inventions; and am now expending large sums in preparing to make and sell goods under the same.

"I have, on some few of my Patents, realized some profits, but expended much more, which, it is probable, I may never see returned.

"I have been ruined more than once in my efforts to introduce these various improvements, though I have never

failed ultimately to pay all my debts."

NOTE.—Has not this man been a public benefactor? Has he not conferred great benefits upon the people, which have cost them nothing? Would it be just to allow an indiscriminate use of his successful Patents by the payment of a royalty, to be fixed by the government? Nothing could be more unjust.

Another correspondent gives a list of twenty-six cases; but, as none of them have any special reputation, I will omit the details. The result is as follows:—

- 14 brought no return.
- 3 paid expenses.
- 4 paid indirectly to the manufacturer.
- 1 realized \$2,000.
- 1 realized \$2,500.
- 3 are producing fair royalties.

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It appears, that, in these cases, several of the patentees were ruined in their efforts for improvement; so that the balance of the account will be found in this, as in most other cases of like character, largely on the wrong side.

Investigation will show that Patents are almost as uncer-

tain as the wind in their pecuniary results; while in their material results, as promoting our national glory and progress, their success has been unexampled.

The rewards are unequally and frequently unjustly divided; and the same may be said of the general division, in this

world, of property and prosperity ; but this belongs to a dispensation of things which lies beyond human control.

[From a Manufacturer.]

" We are engaged in improving and manufacturing a special branch of plumbing work, and have been so for eighteen years past.

" We have expended large sums of money in taking out Patents, and in perfecting old Patents, and in protecting the same.

" We own fifteen Patents, and have only during the past two years begun to realize any benefits from them."

The second inquiry was as follows :—

2. *The name of inventions in agriculture, commerce, manufactures, and the mechanic arts, of the greatest public utility.*

[From an Attorney.]

" Among some of the most important inventions of the present age, I will mention, in *agriculture*, the mowing-machine, invented by Ketchum, and improved by Forbush ; the

reaping-machine, with which McCormick and others are inseparably associated ; in *commerce*, the steamboat by Fulton, the telegraph by Morse, and the locomotive by Stephenson ; in the *mechanic arts*, the sewing-machine by Howe, and improved by Wilson, Fitzgerald, and others. Numerous others might be mentioned, with which you are equally familiar."

[From another Manufacturer.]

" Mowing and reaping machines, corn and potato planters, windmills, steam-machinery, railroads," &c.

The third inquiry :—

3. *Capital required to introduce inventions, and the effect that open competition would have upon such investment of capital.*

[From an Attorney.]

" To my knowledge, large amounts of capital are often required to introduce inventions, and properly put them before the public. In some cases a hundred thousand dollars is not more than is necessary for the inauguration of the enterprise, while, of course, in other cases,

a much less sum is quite sufficient.

"It is a very common thing for capitalists to refuse to invest money in such enterprises, until they can be assured of the protection of a Patent. Many such cases have occurred under my own immediate observation.

"In my opinion, the effect of open competition upon such investments of capital would be, that comparatively few men would be willing to incur the risk, the expense and the losses incident to the extensive introduction of a new invention, simply to teach their neighbors how to make money by their experience, as soon as the invention proved a success."

[From another Manufacturer.]

"If an invention be like the 'Creamer Safety Break,' or any thing of that character, a large amount of capital, labor, and perseverance, is required."

[From still Another.]

"If the Patent System in the United States was to be materially curtailed, it would destroy

the ambition of inventors, and place us back in the dormant position of past ages, so far as relates to improvements.

"To make new articles requires additional capital; and to introduce them in competition with those of established reputation, and with the opposition of merchants holding such stocks, is always found to be expensive and difficult."

[From a noted Inventor.]

"It is my impression, from having visited personally a large proportion of all the manufacturing establishments in the United States, that full three-fourths, and perhaps more, of the capital thus invested, has been attracted by the protection offered to Patents; also, that, by this protection, manufacturers are warranted in making a great outlay for the best machinery, by which means they can not only make a far better article than could be otherwise made, but they can furnish the article to the public for one-half, and sometimes one-fifth, or even one-

tenth, the cost to make an article of a poorer quality, without the machinery, and still make a fair business profit by systematizing the business, and doing it upon a large scale.

“Without any protection they would, in my judgment, be as *insane* as would a person who should expend his money and time in the building of costly dwellings on lands for which he possessed no shadow of title.

“I feel quite sure that the unparalleled success of this country is, to a very considerable extent, due to the encouragement which Congress has given to inventors in order to promote the progress of the useful arts.

“Congress in its wisdom has foreseen the necessity of surrounding authors and inventors with the surest protection possible ; and therefore it reserved to itself the supreme control of their rights, as it did of no other class of persons or property. And who does not see that this very provision has given

this country a degree of prosperity not known in any other country in the world ? Stop this protection, and you shut up numbers of the large manufacturing establishments which now contribute so materially to our national prosperity.”

[From a large Manufacturer.]

“It has required a large capital to introduce my goods, and for machinery to manufacture the same. The cost for contesting the validity of my Patents, and preventing infringements, has been great. The effect of an open competition would be to stop the progress of improvement.”

[From an Attorney.]

“The effect of open competition upon the investment of capital in the introduction of inventions would, in my opinion, be detrimental. It would deter capitalists from investing in such enterprises ; and the inventor, together with the most valuable inventions, would seek the required aid in vain.”

The fourth inquiry :—

4. *The proportion of inventions upon which any profit whatever is realized to inventor or manufacturer.*

[From an Inventor.]

"I should think about one-eighth made some profit. The balance hardly pay the cost of Patent fees. About two per cent may be said to be really profitable."

[From a Manufacturer.]

"From my information and experience, I fully believe that not one-tenth of all the Patents issued in the United States ever give the inventor any profits."

[From an Inventor.]

"I do not remember a single inventor who died after the expiration of his Patent, that left any property to show for it, unless he made it by the manufacture of the article; and that profit he could have made in common with others without any Patent.

"The men who purchase a right to use a Patent proceed at once to realize something on the invention; while the patentee is at all times expending his money for still further improvements.

"Neither do I know of a single Patent in which the machine or article made from it was sold any cheaper by reason of the Patent having expired. It is far more for the interest, or at least in accordance with the inclination of the patentee, to attempt to produce the cheapest as well as the best article, than the one who simply manufactures the articles to sell.

"In my opinion, it should be the policy of Congress to extend the Patent of every man who took sufficient interest in it to ask for an extension; since it would tend to produce a competition among the owners of Patents to produce the best and cheapest articles, while it would greatly stimulate invention, in order to excel articles already in use."

[From a Manufacturer.]

"In our case we have had to pay such large sums for protecting and sustaining our Patents, that we have not realized large, or even fair profits. We believe the proportion of Patents upon which any profit is realized is small; have heard it stated at one in a hundred of good paying Patents; and I judge, from my own experience and observation, that this is about a fair estimate."

[From an Attorney.]

"The proportion of inventions upon which any profit over and above the labor and expense of perfecting the same, and procuring the Patent therefor, and of the efforts to introduce it, is realized to inventors, is very small, probably not exceeding one-tenth, and perhaps not one-twentieth. Of the ten or twelve thousand Patents that are granted annually, I doubt if over five hundred of them realize to the inventors any profit, certainly not what they could have realized if the same time, labor, and money

had been expended and invested in other legitimate mercantile or mechanical employments. The Patents which are very lucrative to inventors or manufacturers are comparatively few.

"Some of these few have become, after long and toilsome years, and the investment of immense capital, very remunerative and profitable. While these few are known and published abroad, the eighty or ninety per cent are not noticed or taken into account.

"I think it is safe to say that full eighty out of every hundred of the Patents granted in this country fail to realize to the inventor or the manufacturer any profit whatever, — I might say the first or early manufacturer; for as soon as it is ascertained that a newly-patented article will not pay to manufacture, that the demand will not warrant the establishment of large works, and the investment of large capital, the enterprise is dropped. But it often happens that manufacturers' calculations are sadly

disappointed ; and after large amounts have been invested in buildings, materials, tools, &c., the foundation, the subject on which success depends, proves a phantom and a failure."

The fifth inquiry.

*5. The effect of a legal enactment permitting the general use of patented inventions upon payment of a royalty of ten per cent upon the value of the article manufactured; the Patent to remain in force but seven years.*

[From an Attorney.]

"I think that a law permitting the general use of patented inventions, upon the payment of a royalty of ten per cent upon the value of the articles, would be disastrous to the last degree.

"In the first place it gives no exclusive privilege to any one, and consequently takes away the inducement which capitalists now have to expend money in the introduction of new inventions. In the second place, it is not a fair standard of value. Some might be worth

more; while a much larger number would be dear at half that amount.

"Furthermore, in many cases the chief value of the invention consists in the exclusive right to use a machine in a particular territory. A patented planing-machine may furnish a good and familiar example. The exclusive right to use one such machine in Albany County might be worth one hundred thousand dollars, while the exclusive right to use an exactly similar machine in Wyoming County might not be worth five thousand; and yet it costs the same to build the machine in both cases.

"To make a law, then, throwing inventions open to the public, upon payment of ten per cent upon the value of the articles in a general market, would, in my opinion, be seriously unjust, as well as unfortunate. Seven years is not generally sufficient time for the introduction of an invention, and the remuneration of an inventor."

[From an Inventor.]

"As a rule, I should think this plan unfavorable. It would produce litigation, complication, and trouble."

[From a Manufacturer.]

"Were such a plan adopted, I feel confident that not more than one Patent would be issued where there are now fifty, and hence the comparative non-use of the present system."

[From an Inventor.]

"As to any attempt—for any cause short of the government purchasing the Patent, and thus insuring a proper remuneration to the inventor—to shorten the life of a Patent, I should think about as wise as to pass laws that all purchases of property from the public domain hereafter should be held by the purchaser for a period of only seven years, and should then revert to the government."

[From a Manufacturer.]

"Such a law would, in our opinion, actually kill the Patent business. It generally takes as long as seven years

to introduce a new patented article."

[From an Attorney.]

"The effect of any enactment which shall permit the general use of patented inventions, upon payment of a royalty of ten per cent upon the value of the article manufactured, the Patent to remain in force only seven years, would, in my judgment, be almost equivalent to stopping 'the wheels of time.' It would dry up all the sources of improvement in manufactures and the mechanic arts, and so paralyze and cripple the genius of our country as to stop progress at once. How shall an inventor in the New-England States know who is using his invention in the West or the South?

"How shall the latter be made to account to the former?

"Our Patent Laws are, for the most part, well enough as they are. They should not be changed except upon great deliberation."

The sixth inquiry:—

*6. The average net profit upon specified patented articles, after payment of interest on capital employed, and every contingency.*

[From an Inventor.]

“Taking all patented inventions into account, the average would be a loss, in my judgment. Among those that are profitable, I should think they might average ten per cent.”

[From a Manufacturer.]

“I have been twenty-five years manufacturing patented articles, and have spent very much more money than I have received from them; and I am assured that my own is an average experience, taking into account the frequent heavy payments to be made to the legal profession for services rendered in the defence and maintenance of rights.”

[From another Manufacturer.]

“We think about ten per cent, after paying interest upon capital.”

[From an Attorney.]

“I might, had I the time, specify a few patented articles upon which the net profit is large, over and above all expenses and contingencies; but I could give you a much longer list of those that do not pay five per cent, and a still longer one of those that do not pay any thing.

“The company owning Philips’s Corn-Husking Machine have built a hundred of them, only to find out that they were insufficient for the work. They have expended a large amount in perfecting and bringing this machine to public notice, and as yet have no returns.”

“So with the Paper Car Wheel, a valuable invention, without doubt; but the company who have recently erected fine buildings in Hudson, for the manufacture of this wheel, and have all the machinery fitted for the work, have yet a great deal to do and to suffer, before getting their wheel into general use. What if the profits of the manufacture of the wheel are large? If there is no

demand for them, it avails nothing. It takes money, time, and hard work, to introduce a new invention of any importance or value."

( The seventh inquiry :—

7. *Cite cases showing that the public are not compelled to pay unreasonable profits upon the cost of patented articles of prime necessity.*

[From an Attorney.]

" This may be answered, perhaps, as well by reference to lamps, as to any article of manufacture. There is scarcely a lamp made at the present time, that is not subject to one or more patents ; and yet they are sold very cheap, cheaper than ever before."

[From a Manufacturer.]

" Heavy stocks of old goods on hand compel the manufacturers of new patented articles to peddle them over the country at a heavy cost in order to create a sale for them.

" The Patent is for the benefit of all alike, enabling the manufacturer to perfect his articles, and charge a price corresponding with same ; while the

goods in open competition reach the market in a half-built and comparatively worthless condition."

[From another Manufacturer.]

" In the case of the special articles of plumbing work before referred to, we do not consider that they pay more than ten per cent ; for the public get more than that actual benefit from such articles. Through these patented improvements, the cost of putting up the same has been reduced to about one-half of what it was formerly."

( The eighth inquiry :—

8. *Would capital embark in the manufacture of new inventions unless protected by Letters Patent ?*

[From an Attorney.]

" In my opinion, capitalists would generally be unwilling to invest their money in the manufacture of new inventions, unless protected by Letters Patent."

[From an Inventor.]

" For myself I would not undertake the introduction of

any new article, unless, after the great trouble resulting from the same, I could hope for permanent reward."

[From a Manufacturer.]

"Emphatically no!"

[From another Manufacturer.]

"It would not."

[From an Attorney.]

"It is my decided opinion that capital would not embark in the manufacture of new inventions, to any extent, were it not for the protection promised, and supposed to be afforded, by Letters Patent. The idea of a monopoly of the invention stimulates the inventor to labor, and to persevere even to the ruin of his present pecuniary condition, and encourages capitalists to invest in the manufacture of patented articles, when, if not so protected, few inventions would be perfected, and it would be difficult to induce capital to embark in those that were perfected, for the reason that competition would soon destroy the remunerative profits

that the pioneers and originators deserve and require to pay them not only for the risk, but for the loss in time and expense, in trials and experiments, always attendant upon new and untried enterprises."

I will now proceed to consider somewhat in detail the statements made by Mr. Sayler in respect to the profits realized in the manufacture and sale of certain patented articles as based upon the census reports of 1870, and to show, by the same questionable authority, the general range of profits realized in the manufacture and sale of certain unpatented articles.

FIRST, It is not true that "the owner of a Patent right is lord of all he surveys."

i. The inventive genius of our people does not allow any monopoly long to continue. Something will be made to equal or excel a former invention, which is not subordinate to it; or an improvement will be made in some important feature of the machine, there-

by compelling an amicable division.

2. It is an exception when the owner of a Patent does not allow others to put the same in practice, upon the payment of a reasonable royalty.

3. If this permission is not freely given, the use of the invention is too often taken without consent; and, in a contest of capital against poverty, the former is generally triumphant.

SECOND, It is not true, as a rule, that owners of Patents "desire to wrench from the labor of the country the largest possible percentage."

Patentees, like the rest of the world, are doubtless fond of making money; but they are generally wise enough to discover that such a method of securing it will not bring the greatest permanent success, as it will surely invite competition in some form. His Honor Judge Emmons has lately said, "We cannot speak with great certainty, but do affirm with much confidence, that the expenses paid in our

country for Patent litigations are rapidly approximating the entire sum demanded for royalties."

Investigation will show that the manufacturers of patented articles do not generally, at the best, realize more than a reasonable income for the risk incurred; and, further, that only a small proportion ever see any return for their investments in such enterprises.

(The few who are successful come prominently into public notice; while the many who fail, or are only partially successful, are not heard of.

Of the 170,000 Patents which have been issued by our Government since July 31, 1790, can it be doubted, that by far the largest proportion have proved unremunerative?

THIRD, The unrestricted liberty to put in practice new inventions would bring upon the market a large amount of indifferent work, thus injuring by competition, instead of benefiting the public.

In the case of machines embodying newly-discovered principles and adaptations, where a vast amount of laborious and costly experiment must be made before a perfected result, which will be acceptable to the public is produced, nothing can be attempted, except by capitalists; and these would be quite certain to withhold their aid, unless assured, for a limited time at least, of governmental protection.

Little is known by the public of the trials, the disappoint-

ments, and the losses of inventors and those who attempt to perfect and introduce patented articles. I believe that an investigation would show, that the balance of the Patent account of this country is very largely on the wrong side.

The cost of obtaining the twelve thousand Patents and re-issues granted during the year 1874, including the time devoted to these inventions, may be safely estimated at four and a half millions; say,—

12,000 models at \$25	· · · · ·	· · · · ·	· · · · ·	\$300,000.00
12,000 patent and attorneys' fees at \$100	· · · · ·	· · · · ·	· · · · ·	1,200 000.00
12,000 inventors' time, each fifty days, at \$5 per day	· · · · ·	· · · · ·	· · · · ·	3,000,000.00
				\$4,500,000.00

Of this large number, how small a proportion have, or ever will achieve, even a moderate success!

Could the history of the disappointments and disasters experienced by the inventors and manufacturers of the sewing-machine, the mower, the harvester, the cotton-gin, and other great inventions, be

portrayed in all their sombre shades, the subsequent success which has attended them would be gracefully accepted, as but a small return for the untold blessings which they have conferred, and will continue to confer upon the world.

If, in the early days of these and similar machines, such an unrestricted liberty to put them

in practice had been allowed as proposed in the bill, the country would have been flooded with constructions valueless to the public, inflicting an injury and loss a hundred-fold greater than any apparent amount of excessive profits that can now be shown.

After all this expenditure of labor and capital in perfecting, and placing upon a substantial basis, such inventions, it is quite probable that the general public who have stood by, and jeered perhaps at the supposed folly of those who have risked their all in these enterprises, would then be glad to enjoy the fruits without much cost.

The simple questions are,—

1. Would such a course be just? And,
2. Would it encourage further efforts for improvements?

FOURTH, The bill proposes that a royalty of ten per cent shall be fixed by law upon the market value of the article manufactured, which embodies but one Patent, and where more than one is embodied,

that the respective royalties shall be fixed by the United States District Court.

That such an act of tyranny would be unconstitutional must be evident to the common sense of the people of this country.

That it is altogether impracticable must be equally clear, as well as that its effect would be to promote litigation.

In the adjusting of royalties upon the Patents in use at the present time, there probably could not be found two cases in which the percentage upon the market value of the article would be the same.

I own a valuable Patent upon an article of manufacture,—

I charge fifty cents upon those sold by retail at \$25, and a dollar upon those sold at \$50. This is two and a half per cent; and it is about on this basis that all royalties are paid for the use of Patents.

In the payment of such royalties, the manufacturer should add to his prices, say, 75 cents and \$1.25 each. I think this rate is never exceeded, and,

more generally, not realized.

The same principle is applied to other constructions. Mr. Howe struggled through many years of poverty while perfecting his sewing-machine; but the royalties he received did not exceed, during the life of his Patents, an average of \$3.00, and, during the term of his extension, but \$1.00 each.

Has any woman in the land ever begrimed this pittance for the boon which he had given to her sex, or even the large profits, if you please, of the manufacturers during the early years of the enterprise?

As well might it be attempted to establish judicially the rate for wages, or the price of commodities. These must all be left to demand and supply, and to the ten thousand shades of difference, which can only be adjusted as the circumstances arise, and by the parties interested.

The bill further provides, "that the person so using the Patent shall protect the owner, by filing in the Patent Office a

bond in the sum of \$10,000, conditioned upon the accounting every six months for the royalty, and the payment thereof." Could any plan be more skilfully devised than this to aid the rich and embarrass the poor manufacturer?

If the friends of the Patent System had introduced such a proposition in addition to that of increasing the percentage of royalties at least fourfold of the average now paid, it would have justly roused public indignation.

How many thousands of poor mechanics throughout the land who are now using patented inventions, and paying the owners for the same under mutual agreement, would be utterly unable to give bonds for \$10,000, which would be satisfactory to the Commissioner of Patents? Such a requirement would rob them of the most lucrative part of their business, and transfer it to their rich competitors.

Again: the inequality of such a statute will be apparent in view of the diverse amounts annually due respectively, for

royalties. They might be \$5,000 or \$50,000: therefore a bond of \$10,000 might be greatly in excess of the amount, or entirely inadequate as security for the same.

Again: it is provided, that in case the inventions covered by a plurality of Patents are adopted in one machine, and the first adjustment of the royalty by the District Court is not satisfactory to the owners of the same, "they may, on thirty days' notice, have a readjustment, which shall be final."

The utter impossibility of any court, however able or learned, to make such an adjustment as shall be mutually satisfactory to the manufacturer, and also to half a score of patentees, is apparent to any practical mind; as is also the absurdity of attempting to fix values by law, which "shall be final."

These ten Patents to-day have a certain value: to-morrow that value is materially changed by the advent of new inventions and new combina-

tions, as well as by new public demands.

No fixed law could be carried into practice for the proper adjustment of these intricate questions.

**FIFTH**, Mr. Sayler presents certain statistical statements, based upon the last census, for the purpose of proving that exorbitant profits are realized by manufacturers upon patented articles.

He assumes the correctness of the authority by adopting conclusions from the same, without any qualifications.

Let us see, for a moment, what the superintendent of the census says about the returns made of our manufacturing industry, and to what extent they are worthy of confidence.

"The collection of manufacturing statistics is made merely an incident to the enumeration of population, and, like all other duties incidental, is certain to be neglected, more or less, in all but the rarest cases. . . .

"The assistant marshal, assuming that he is zealous and faithful in his general service, carries about the manufacturing schedule as a tedious and unwelcome duty,—a duty to be discharged in the cheapest and easiest manner. . . .

"The rates of compensation being most inadequate, in respect to the return of manufactures, this part of the census suffers most from this cause. . . .

"The investigation of the census office, conducted at great disadvantage, discovered not a few cases where less than one-half of the establishments of productive industry by law subject to enumeration had been returned, or even visited by the assistant marshals. . . .

"The census returns of capital invested in manufactures is entirely untrustworthy and delusive. The inquiry is one which it is not too much to say, that it ought never to be embraced in the schedules of the census; not merely for the reason that the results are, and must remain, wholly worthless,

. . . but also because the inquiry in respect to capital creates more prejudice, and arouses more opposition to the progress of the enumeration, than all the other inquiries of the manufacturing schedule united. . . .

"No man in business knows what he is worth, far less can say what portion of his estate is to be treated as capital.

"The aggregate amount of capital invested in manufactures in the United States, as by the following tables, is \$2,118,208,769.

"It is doubtful whether this sum represents one-fourth of the capital actually contributing to the annual gross products of \$4,232,325,442."

These few extracts, to which many more might be added of the same character, indicate the low estimate which the superintendent places upon the correctness of the returns of our manufacturing industry.

It is not probable that one manufacturer in twenty-five could state with any certainty

the amount of capital employed in his business, or the amount paid for labor or for materials, or what the annual profits are upon the capital invested.

The general ignorance of manufacturers as to the actual cost, in detail, of their goods, is almost beyond belief. How, then, can reports be made to the marshals which are reliable, as a basis for the settling of important points in political economy?

Waiving, however, for the present, this question, I will proceed to submit in a tabular form a detailed statement in respect to the five patented articles, the two unpatented articles, and the total amount of our manufacturing industry, as cited from the census reports by Mr. Sayler.

We gain from these tables two points:—

1. That, according to the census reports, many classes of manufactures which are open to the public, pay a much larger income on the capital invested than the best of those

which are protected by Patents; and,

2. That the superintendent is quite correct in his admission that "*the returns of manufacturing statistics are entirely untrustworthy and delusive.*"

It is very evident that Mr. Sayler has had no experience in manufacturing, or he would not have ventured the statement, that the cost is represented by the amount paid for labor and materials, and that the balance of the amount realized from the sale of the product is *net profit*, though he qualifies this statement by adding, "This is not the absolute net profit, but approximates to it." This method of arriving at results will not bear the test of investigation.

#### PATENT MEDICINES.

This compounded product Mr. Sayler reports as paying a profit of one hundred and eighteen per cent upon the capital invested, and as one of the five patented articles which constitute one twenty-second of the

	Wages.	Materials.	Product.	Balance.	Capital.	True Amount as reported by the State Treasury on March 1 <sup>st</sup> of each year.
House Organs and Melodeons.	\$264,485	\$233,767	\$596,685	\$98,433	\$408,000	61 24.1
Woollen Goods, unpatented . . .	26,648,272	93,406,884	151,298,196	31,243,040	97,173,432	35 32.2
Tanned Leather, unpatented . . .	7,934,416	63,069,491	86,170,883	15,166,976	42,720,505	35 35.5
Agricultural Implements . . . . .	12,151,504	21,473,925	52,066,875	18,441,446	34,834,600	52 52.9
India Rubber Goods . . . . .	2,559,877	7,434,742	14,566,374	4,571,755	7,486,608	59 61.1
Sewing-Machines . . . . .	5,142,248	3,055,786	14,097,446	5,899,412	8,759,431	67 67.3
Pat. Medicines and Compounds	1,017,795	7,319,752	16,257,720	7,920,173	6,667,684	118 118.8
Aggregate of Five Pat. Articles	21,135,999	39,517,972	97,585,100	36,931,219	58,156,323	71.4 63.5
All Branches of Manufactures .	775,584,343	2,488,427,242	4,232,325,442	968,313,857	2,118,208,769	40 45.7

In contrast with this statement as to the profit on patented articles, it may be interesting to compare a statement of profits, as shown by the same census, upon articles not patented; viz.,—

	Wages.	Materials.	Products.	Balance.	Capital.	Percentages of Profits Capital on
Cotton Goods .....	\$39,193,383	\$111,976,716	\$177,993,687	\$26,823,588	\$140,997,892	19
Nails and Spikes .....	3,961,172	18,792,383	24,823,966	2,070,441	9,091,912	22.8
Pig Iron .....	12,475,250	45,498,017	69,640,498	11,667,231	56,145,326	20.8
Agriculture .....	310,286,285		2,447,538,658	2,137,252,373	9,599,682,290	22.3
Stoves, &c. .....	8,156,121	9,044,069	23,380,665	6,189,475	19,833,720	31.2
Prints .....	3,438,089	46,373,358	54,446,044	4,634,597	13,367,553	34.7
Writing Paper .....	1,470,446	6,009,751	9,363,384	1,883,187	6,314,674	29.8
Pianos .....	3,071,392	2,924,777	8,329,594	2,333,425	6,019,311	38.8
Musical Instruments generally .....	5,107,291	4,834,552	13,905,908	3,964,065	9,554,761	41.5
Steel .....	1,651,132	5,166,003	9,600,986	2,792,851	6,345,400	44
Hardware .....	6,845,640	9,188,064	22,237,329	6,203,625	13,869,315	44.7
Job Printing .....	2,710,234	2,966,709	8,511,934	2,834,991	6,007,354	47.2
Cheese .....	706,566	14,089,284	16,771,665	1,975,815	3,690,975	53.5
Book Binding .....	3,095,821	8,026,870	14,077,309	2,954,618	5,319,410	55.5
Furniture .....	17,901,379	21,669,837	57,926,547	18,355,331	35,740,029	51.4
Carriages and Wagons .....	21,272,730	22,787,341	65,362,837	21,302,766	36,563,095	58.3
Upholstery .....	1,679,217	4,740,572	9,379,310	2,959,521	4,683,049	63.2
Clothing .....	33,266,535	92,632,684	161,560,836	35,667,617	53,411,598	66.8
Saddlery and Harness .....	7,046,207	16,068,310	32,709,981	9,595,464	13,935,961	68.8
Shovels and Spades .....	489,100	1,424,044	2,445,526	531,482	757,100	70.2
Boots and Shoes .....	51,972,712	93,582,528	181,640,090	36,088,859	48,994,366	73.7
Fancy Soaps, Perfumery, &c. ....	260,415	892,219	2,029,582	876,948	1,172,900	74.7

	Wages.	Materials.	Product.	Balance.	Capital.	Percentage of Profits Capital.
Brooms .....	\$1,268,875	\$3,672,837	\$6,622,285	\$1,680,573	\$2,015,602	83.3
Watch-Cases .....	55,918	1,152,979	2,333,340	625,343	730,500	85.6
Tobacco .....	14,315,342	34,656,607	71,762,044	22,790,095	24,924,330	90.2
Wheelwrighting .....	1,353,474	1,907,418	5,846,943	2,586,051	2,839,316	91
Hats and Caps .....	6,574,490	12,262,107	24,848,167	6,011,570	6,489,571	92.6
Distilled Liquors .....	2,019,810	19,729,432	36,191,133	14,441,891	15,545,116	92.9
Bread and other Bakers' Produce .....	5,353,184	22,211,856	36,907,704	9,342,664	10,025,966	93.2
Pocket-Books .....	293,258	467,922	1,108,380	347,200	351,225	98.8
Clocks .....	80,5340	818,409	2,509,643	885,894	882,700	100.4
Confectionery .....	2,091,826	8,703,560	15,922,643	5,127,257	4,995,293	102.6
Blacking .....	107,450	428,716	817,768	281,602	266,750	105.6
Fans .....	23,426	37,279	92,100	31,395	28,000	112.1
Trunks, Valises, and Satchels .....	1,810,798	3,315,038	7,725,488	2,599,652	2,185,964	118.9
Balances and Scales .....	668,451	920,870	2,823,816	1,234,495	1,019,500	121.1
Blacksmithing .....	9,246,549	13,223,907	41,828,296	19,357,840	15,977,992	121.2
Painting .....	4,169,839	4,999,475	13,244,498	4,084,184	2,797,306	146
Carpenters and Builders .....	29,169,588	65,943,115	132,901,432	37,788,729	25,110,428	150.4
Lead Pipe .....	115,020	9,303,869	12,861,959	3,443,070	2,054,500	167.6
Plastering .....	900,395	907,524	2,659,025	851,106	353,462	240.8

net aggregate profits of all our manufacturing industry.

Taking the census report as our authority, we find that these profits represent one twenty-sixth of the whole; but this difference is not material.

Upon the basis of this report,

the profits shown upon the following *non-patented* articles of correspondingly small value, would seem to prove that the manufacturers of Patent Medicines are by no means unreasonable in their demands; viz.,—

On confectionery . . . . .	$102\frac{6}{10}$	per cent.
On fancy soaps and perfumery . . .	$74\frac{7}{10}$	"
On blacking . . . . .	$105\frac{8}{10}$	"
On pocket-books . . . . .	$98\frac{8}{10}$	"
On fans . . . . .	$112\frac{1}{10}$	"

Or an average profit of  $98\frac{7}{10}$  per cent.

#### RUBBER GOODS.

Mr. Sayler reports the profits upon this class of manufacture at fifty-nine per cent. The true amount as reported

by the census is sixty-one and one-tenth per cent.

Compare the reported profits upon similar articles not patented.

On saddlery and harness . . . . .	$68\frac{8}{10}$	per cent.
On clothing . . . . .	$66\frac{8}{10}$	"
On hats and caps . . . . .	$92\frac{6}{10}$	"
On boots and shoes . . . . .	$73\frac{7}{10}$	"
On trunks and valises . . . . .	$118\frac{9}{10}$	"

Or an average of  $84\frac{2}{10}$  per cent.

According to this statement, the charge of extortion cannot be maintained against the manufacturers of rubber goods, who, as it appears, only ask a profit of sixty-one and one-

tenth per cent; while the manufacturers of the five classes above named, which are not patented, demand an average profit of eighty-four and two-tenths per cent.

If those "two hundred or three hundred dentists in Indiana" had respected the rights of the owner of the hard rubber Patent, which they well understood the Supreme Court had sustained, they would have been saved the cost and trouble complained of, and, perhaps, some portion of the "amount of blood demanded."

The application of Vulcanite to the art of Dentistry, by Cummings, conferred a blessing of untold value to the world.

The profession had unsuccessfully experimented with other substances for years; and when this was discovered, and brought to their attention, they should have cheerfully paid the trifling sum that was due to the genius and perseverance of the inventor. His efforts to perfect and secure his invention, and to protect it from infringers, were made at the sacrifice of both health and property. His Honor Judge Emmons, in a late decision, says, "At that time Cummings had become insolvent, and his health seriously impaired, by chronic disease,

which ultimately terminated his life.

"The testimony leaves no room for doubt, that, after this period, he wholly ceased to furnish any considerable part of the support of his family. His wife's small separate property was first mortgaged, and then sold, to procure what is proved to be the small and sometimes too scanty expenditure upon which they lived. The praiseworthy efforts of his wife as the keeper of a boarding-house, the pawning of her few personal ornaments, and her general care and support of a diseased and dispirited husband, present a picture as affecting as it is demonstrative of Cummings's inability, from sheer poverty, to prosecute his application."

This is substantially the history of thousands, the results of whose labors and sacrifices we are now so freely enjoying.

#### HOUSE ORGANS.

It is alleged that the cruel and bloodthirsty manufacturers of house organs demand a net profit of sixty-one per

cent, and refuse to abate one "jot or tittle," be the cries for "music, which is so dear to the human breast," ever so pressing.

It is a pity to spoil this flight of fancy by stating that the profits on house organs and melodeons, as stated by the

census reports, are only twenty-four and one-tenth per cent, or considerably less than one-half the amount stated by Mr. Sayler.

Let us now compare the reports from the same authentic source upon similar articles *not* patented.

On musical instruments generally . . . . .	$41\frac{5}{10}$ per cent.
On pianos . . . . .	$38\frac{8}{10}$ "
On furniture . . . . .	$51\frac{4}{10}$ "
On clocks . . . . .	$100\frac{4}{10}$ "
On carpentry and building . . . . .	$150\frac{4}{10}$ "

It therefore appears that the manufacturers of these five classes which are unrestricted, demand an average profit upon the capital invested of seventy-six and five-tenths per cent; while house organs and melodeons pay but twenty-four and one-tenth per cent, or less than one-third of that amount.

#### SEWING-MACHINES.

This great invention, the one of all others which has blest the poor "toilers by the midnight lamp," appears to have

incurred the particular displeasure of Mr. Sayler.

The census returns show upon this branch of industry a profit of sixty-seven and three-tenths per cent,—a moderate amount, truly, in comparison with the extortionate demands of the manufacturers of the following non-patented articles, which, if we may believe the veracious census reports before referred to, pay an average profit upon the capital invested of a hundred and twenty-nine and eight-tenths per cent; viz.,—

On bread and other bakers' products	93 $\frac{2}{10}$	per cent.
On scales and balances . . . . .	121 $\frac{1}{10}$	"
On blacksmithing . . . . .	121 $\frac{2}{10}$	"
On painting . . . . .	146	"
On lead pipe . . . . .	167 $\frac{6}{10}$	"

Mr. Sayler states, that, in 1871, 610,000 sewing-machines were sold at a profit of \$24 each, or \$14,640,000.

The census returns show the results of 1870 as follows:—

Products . . . . .	\$14,097,446.00
Paid for materials . . . . .	\$3,055,786.00
Paid for wages . . . . .	<u>5,142,248.00</u>
	8,198,034.00
Profits . . . . .	<u>\$5,899,412.00</u>

578,919 machines sold, averaging a profit of \$10.19 each.

This result is obtained without any calculation for other items of cost.

It will be observed, that, according to the census reports, the manufacture of bread and other products of the bakery is one of the most profitable in which capital can engage. Articles of such prime necessity to the people, and especially to the "toilers by the midnight lamp," should not be suffered to pay a profit of ninety-three and two-tenths per cent.

If the government is warranted in establishing the prices for any branch of manufactures, this should receive immediate attention.

The notice of Mr. Sayler is especially called to this subject, and also to the manufacture of cheese, which is reported as paying fifty-three and five-tenths per cent profit on the capital invested.

#### AGRICULTURAL IMPLEMENTS.

This most important branch of our mechanical industry,

against which Mr. Sayler appears to entertain a special grudge, he represents as giving to the manufacturers the princely income of fifty-two per cent.

In comparison with several

of the trades which are not protected by Patents, but are open and free to all the world, this is a meagre sum.

Thus we find the profits:—

On upholstery . . . . .	$63\frac{2}{10}$	per cent.
On shovels and spades . . . . .	$70\frac{2}{10}$	"
On watch-cases . . . . .	$85\frac{6}{10}$	"
On wheelwrighting. . . . .	91	"
On plastering . . . . .	$240\frac{8}{10}$	"

The average profit thus shown is a hundred and ten and two-tenths per cent, or more than double that upon agricultural implements, many of which have conferred blessings both upon our farmers and our country, millions to one beyond all the royalties that have been paid upon Patents since the organization of our government.

I have already shown that the average profit upon the capital invested in the five classes of patented articles specially mentioned by Mr. Sayler, as given in the census reports, is sixty-three and five-tenths per cent.

Upon the twenty-five classes

of unpatented articles or industries quoted, the average profit upon the capital employed, as given by the same authority, is ninety-nine and nine-tenths per cent, or thirty-six and four-tenths per cent more than upon the former, which is claimed to be so unjust and extortionate.

It is scarcely necessary to remark, that neither of the statements embodied in the census reports in respect to the profits upon patented or unpatented articles is worthy of the least confidence: in the words of the superintendent, they are "*entirely untrustworthy and delusive.*"

A true statement of the

facts would probably show an average income upon the capital invested in our mechanical industries, of about ten per cent.

Upon patented articles there may be realized from two and a half to five per cent additional; yet this is by no means to be assumed, in view of the cost of perfecting and introducing new and untried arti-

cles, and of the uncertainty of their success.

Untold fortunes have been wasted in these ventures, as well as the lives of thousands whose genius and labors for the benefit of their race deserved a better reward.

Mr. Sayler states that the five patented branches of industry to which he has specially referred aggregate as follows:—

Capital . . . . .	\$59,500,000.00
Net profits . . . . .	37,828,820.00

Again: in pig iron:—

Capital . . . . .	\$56,000,000.00
Net profits . . . . .	11,666,667.00

Or less than one-third the profit of the former.

Again: the same amount invested in cotton goods produced \$10,000,000.

It must be admitted, that statements upon which important legislation is to be based

should be exact. We therefore give the correct figures:—

Capital employed in five branches of patented articles .	\$58,156,323.00
Apparent profit . . . . .	36,931,219.00
Profit on same amount in pig iron at $20\frac{8}{10}$ per cent .	12,096,515.00
Profit on same amount in cotton goods at 19 per cent .	11,049,701.00

Now let us take five unpatented articles, and apply the same rule.

	Capital.	Profits.
Boots and shoes . . . . .	\$48,994,366.00	\$36,088,850.00
Tobacco . . . . .	24,924,330.00	22,790,095.00
Carpenters and builders . . . . .	25,110,428.00	37,788,729.00
Trunks and valises . . . . .	2,185,964.00	2,599,652.00
Lead pipe . . . . .	2,054,500.00	3,443,070.00
	<hr/>	<hr/>
	\$103,269,588.00	\$102,710,396.00

Or  $99\frac{1}{2}$  per cent profit.

The same amount of capital invested in the manufacture of	
pig iron would give a return of only . . . . .	\$21,480,074 00
And in cotton goods . . . . .	19,621,222.00

Mr. Sayler illustrates again.

"This \$59,000,000 of capital invested in these five branches of patented articles constituted one thirty-fifth of the entire capital invested in manufactures in 1870.

"This produced one twenty-second of the net aggregate profit."

To be correct, he should have stated it at one thirty-sixth of the former, and one twenty-sixth of the latter.

Now take the five branches of unpatented articles named above.

The capital invested in these constitutes a little more than one-twentieth of such entire capital; and the profits shown on this are a little more than one-ninth of the entire aggregate profits shown upon the entire manufacturing interest of this country.

Consider, for a moment, that, according to this statement,

these five *unpatented* products, most of which are articles of prime necessity, demand from a suffering public nearly one-tenth of the amount of profits realized upon our whole manufacturing industry.

But this statement, like the former, is a mere fiction. They both prove just two things; viz., —

1. That the superintendent was right when he pronounced the returns as "*entirely untrustworthy and delusive.*"

2. That Mr. Sayler's statements are valueless as a basis for important action.

Discussions in the Congress of the United States upon measures so important as those proposed in this bill (No. 1392) should be based strictly upon facts.

Neither romance nor rhetoric has any place in the consideration, or the decision of a great question which will not

only affect millions of our people, but which also utterly ignores the natural right every man possesses to the control of the production of his brain.

Read the statement which the honorable gentleman deliberately makes in reference to this subject:—

“In any way you may look at it, you will find there is a duplication every two years.

“You may burn up and utterly destroy every agricultural implement manufacturing establishment in the country, and they will yet make four per cent on the invested amount.

“Thirty-five millions of capital invested in agricultural implements doubles itself every two years, and leaves a net profit besides.

“So it goes on and on and on, until, when the ordinary life of a Patent right shall have expired, more than \$400,000,000 has been made, or nearly made, by the original \$35,000,000.”

In reply to this most extraordinary statement, I venture to assert, there is not a manufacturer of agricultural implements in the land that has made, or will make for five or ten consecutive years, an annual profit of twenty per cent upon his capital; that by far the largest proportion have not made ten per cent, while numbers have gone into bankruptcy.

Mr. Sayler inquires “whether, if the commercial community of this country could make ten per cent net profit upon its sales, it would not be amply satisfied.”

No man, except from patriotic motives, or to make himself an occupation, will place his capital at the risk of business on a promise of ten per cent, when he can loan his money on undoubted security at ten per cent to twenty per cent, as is always the case in this country.

If a business realizes net ten per cent, after paying interest on capital, and all contingencies, it is generally considered

satisfactory, if the magnitude is sufficient.

It makes a great difference, however, whether this percentage is on \$5,000, \$50,000, or \$500,000.

Agricultural implements, sewing-machines, and complicated machines of all kinds, require a larger percentage of profit than cotton-cloth or pig-iron ; and any manufacturer who attempts to make the former on a ten per cent profit, without interest on his capital, will surely end in bankruptcy.

We have shown, that, according to our census report, the income on the capital invested in our manufactures is forty-five and seven-tenths per cent.

By the same authority we learn that the percentage of profits upon the cost of the manufactured articles is twenty-nine and six-tenths.

In the eight cases before cited, we find the proportion of the cost due to *sundries* not embraced in the census statement, to be seventeen and a half per cent ; thus leaving an apparent net profit of twelve

and one-tenth per cent, which is probably not far from the truth.

It is unquestionably true, as Mr. Sayler states, that people have been swindled by bogus Patents and by worthless Patents, and they have also by worthless stocks and bonds, and by confidence-games of various kinds ; and this will doubtless continue, in one form or another, to the end of time.

The passage of the bill proposed, or any other bill, will not prevent operations of this kind, while dishonesty exists on the one hand, and ignorance and incapacity on the other.

The selling of town or county rights in Patents, be they good or bad, has nothing to do with the question of extortion by manufacturers. It should stand upon its own basis ; and while there are, doubtless, individual cases of injustice, as a general rule, there can be found but little cause for complaint.

The competition in the sale of important machines is too sharp to admit of any great danger of extortion ; and this

competition is increasing every year.

Suppose, on a reaper now sold at \$150, an ingenious inventor makes an improvement which largely reduces the amount of power required to move it.

The manufacturer charges \$25 additional, or \$175 for this improved machine, and the saving in labor proves to be \$100.

Is anybody wronged? Has not, on the contrary, a great benefit been conferred upon the farming-interest.

The foregoing may be summed up in the following propositions:—

1. That neither the patentee, nor the owner of the Patent, is able to continue an unjust monopoly of a manufacture, for the reason that ingenuity sooner or later produces other inventions which create competition.

2. That manufacturers, even of patented articles, do not, taking one year with another, realize more than a reasonable return for the labor performed, and risk incurred. That it is

not for their interest to incite competition by demanding prices that are onerous, and unjust to the public.

3. That only a small proportion of patentees, or manufacturers of patented articles, achieve success, and are therefore observed. That the great mass who realize disappointment and disaster are wholly lost sight of.

4. That an inventor who produces a valuable improvement, or a manufacturer who makes such an improvement available to the public in a form that is effective and desirable, is a public benefactor, and deserves recompense just in proportion to the merits of his production; and that it should not be measured by the ordinary rule applied to manufacturing profits.

5. That the unrestricted liberty for the public to manufacture machines or products embodying new inventions, would have the effect to flood the country with crude, and unperfected work, which would inflict far more loss and injury,

than all the royalties that have been paid on Patents since the first was issued, eighty-five years ago.

6. That years of labor, and the expenditure of fortunes, are frequently required to bring an invention, even after it has been introduced to the public, to a condition which is available.

7. That, when such a result has been reached, the general public, who have had nothing at risk, would doubtless be very glad to participate in the benefits without cost, labor, or anxiety.

8. That establishing by law a royalty of ten per cent, or any other sum, upon the market value of patented articles, would be,—

*a.* An unconstitutional trespass upon private rights, and,—

*b.* In most cases an exorbitant charge, far beyond what is now made.

*c.* It would promote litigation.

*d.* Such a mode of assessment, without reference to the

value either of the Patent, or of the machine, or of the different conditions of the market, would be wholly impracticable.

9. That it is exceptional, when the owner of a Patent does not allow others to put the same in practice upon the payment of a reasonable royalty,

And, if this permission is not freely given, the use of the invention is too often taken without consent, and to the detriment of the inventor; since, in such a contest, capital is generally triumphant.

10. That the census returns, so far as they relate to our manufacturing industry, are, in the words of the superintendent, "*entirely untrustworthy and delusive*," for the reasons:—

*a.* That collecting these statistics is "merely incidental to the enumeration of population; that the service is poorly paid, and a tedious and unwelcome duty, to be discharged in the cheapest and easiest manner."

*b.* That few manufacturers can state the amount of capital employed, or the amount paid

for wages and material, or the value of their products ; and, even if they could do so, they would in many cases decline, or make a fictitious report.

11. That the census returns show nearly double the percentage of profit upon the capital invested in the manufacture of prominent unpatented articles, than on those which are protected by Patents.

12. That the assumption by

Mr. Sayler, that the difference between the amount paid for wages and material, and the amount realized from the product, is all *net profit*, clearly shows that he has had no manufacturing or commercial experience.

13. That a statement carefully and systematically made up from the books of an extensive stove manufacturer exhibits the following result for a ton of stoves:—

And that this is believed to be a fair representation of other branches, though differing in proportions, and above the average profit.

14. That reports from the few branches of manufactures that I have been able to obtain in the time at my command, show an average profit of nine to thirteen per cent, instead of thirty-

eight per cent, as shown by the census, upon the same branches.

15. That the profit on the manufacture and sale of Patent Medicines is stated at a hundred and eighteen per cent, while the average profit upon five unpatented articles of similar character is shown to be ninety-eight and seven-tenths per cent.

## Same

Profit on rubber goods . . . . .	59 per cent.
Profit on five unpatented classes in contrast	$84\frac{3}{10}$ per cent
Profit on house organs . . . . .	$24\frac{1}{10}$ "
Profit on five unpatented classes in contrast	$76\frac{5}{10}$ "
Profit on sewing-machines . . . . .	67 "
Profit on five unpatented classes in contrast	$129\frac{8}{10}$ "
Profit on agricultural implements . . . . .	52 "
Profit on five unpatented classes in contrast	$110\frac{2}{10}$ "
Average profit on the five patented articles .	$63\frac{5}{10}$ "
Average profit on the twenty-five unpatented articles	$99\frac{9}{10}$ "

16. That the net profits on five patented classes are more than three times as great as on the same amount of capital invested in the manufacture of pig iron, or cotton goods.

That the net profit on five unpatented classes is nearly five times as great as on the same amount of capital invested in pig iron, and more than five times the same amount invested in cotton goods.

17. That the net profit on these five patented classes is one twenty-sixth of the entire amount shown upon all manufacturers.

That the net profit on these five unpatented classes is one-ninth of this entire amount.

I have thus endeavored to show, by a dispassionate array of facts and figures, and also by the views of men whose probity and experience render their opinions of weight, not only the unreasonable character of the arguments advanced by the gentleman from Indiana, but the falsity of the premises upon which they are based.

The disastrous effect of materially changing our Patent System must be evident. Even if there were large profits on patented articles of high merit, as Mr. Sayler alleges, but which, I respectfully submit, has been disproved, the inventor and the manufacturer, who take large risks, deserve it all: they give

to the public far more than they ask in return.

The present Patent System, as before stated, may have its defects; but the aim of all wise legislation should be to improve, and not destroy.

The friends of the system desire these improvements, and they will gladly co-operate in

all proper efforts to secure their adoption.

Our system is already the recognized model for the world; and it should be the aim of legislators to still further elevate its standard, and thus maintain our position in the foremost rank, in the great march of improvement.

# OUR COUNTRY'S DEBT TO PATENTS.

BY

HENRY HOWSON,

OF PHILADELPHIA.

INCLUDING

WHAT PATENTS HAVE DONE FOR US.  
RECKLESS MAKING AND UNMAKING OF PATENT LAWS.  
WHERE DOES THE MONEY GO?  
VALUELESS PATENTS.  
ABOUT INVENTORS.  
ATTACKS ON THE PATENT OFFICE.  
THE CRY AGAINST PATENTS AND INVENTORS.



## OUR COUNTRY'S DEBT TO PATENTS.

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THE alliance of Patents with the progress of the useful arts is so intimate, that any attempt to molest or degrade the former by unwise legislation must disastrously affect the latter.

We constantly hear the word "Patents" from the mouths of the manufacturer and mechanic, the wholesale merchant and retail dealer, and the farmer, and always in connection with something that is novel, or of superior quality, or something that can be obtained at a cheaper rate than usual.

Now and then we hear the word uttered in contemptuous tones, by disappointed speculators, jealous manufacturers, men who would invent, without being inventors, or by those who would attempt to cure the

minor evils always accompanying even the most salutary and beneficent systems of public policy, not by attacking these evils in detail, but by the disorganization of the whole system.

Common as the word is, there are few who are aware how intimately related Patents are to our present well-being and comfort, how much we owe to Patents in the past, how much we have to hope from them in the future, and how intimately they are interwoven with our whole social system.

There are those, however, who have spent many years in acquiring a familiarity with various branches of the industrial arts, and have, through choice or necessity, obtained an

extended experience in Patent matters.

As one of these, I propose to show those who talk flippantly, and write superciliously, about Patents, and especially those legislators, who, without a thorough insight into the subject, would subject the Patent Laws to revolutionary tinkering, that Patents pervade, and are inseparable from, all the artificial surroundings which add to our well-being, comfort, and enjoyment; and I propose to review the subject generally in as condensed a form as possible under the following heads: **WHAT PATENTS HAVE DONE FOR US; RECKLESS MAKING AND UN-MAKING OF PATENT LAWS; WHERE THE MONEY GOES; VALUELESS PATENTS; ABOUT INVENTORS; ATTACKS ON THE PATENT OFFICE; THE CRY AGAINST PATENTS.**

**WHAT PATENTS HAVE DONE  
FOR US.**

I propose to show how grateful we ought to be for our Patent System, not by any elaborate investigation of differ-

ent branches of industry, not by any lengthy historical and statistical researches, but by confining my remarks to familiar objects within my reach in the room which I now occupy,—a library furnished with the ordinary accessories which a professional man requires.

There is a tapestry carpet on the floor,—a carpet with a tasty pattern woven in brilliant colors. Twenty-five years ago, a skilled workman could weave by hand two yards per day of a carpet like this, but not equal in quality; and now a single power loom will weave twenty yards per day. “The carpets, moreover,” to quote the words of a well-known authority, “are more exact in their figures, so that they are perfectly matched, and their surface is smooth and regular. They surpass, indeed, in their quality, the best carpets of their kind manufactured in any other part of the world.”

To-day these superior carpets can be purchased at half the cost per yard charged for the inferior hand-made carpets of thirty years ago; that is, if we

take into account the difference in value of money then and now.

To what shall we attribute this rapid progress in the manufacture of carpets? To Erastus B. Bigelow, you will say. I shall not be detracting from the merits of this great American inventor in saying, as I believe he himself would say, that the rapid progress of this manufacture is due quite as much to our Patent System as to Bigelow's ingenuity.

This accomplished patentee spent years of studious application in the production of his loom. Where was the incentive to this laborious mental task? The reward which our Patent System held out to him. Where was the incentive for capitalists to invest money in the manufacture of these carpets on a large scale? The security which Patents afforded for the investment. Mr. Bigelow, although the most prominent inventor in this branch of industry, was not the sole contributor to its progress. Crompton, and hosts of other patentees,

have aided in bringing this manufacture to its present perfection, or rather to its present state of excellence; for we cannot foresee the end which perfection implies. We must look for further improvements, based on future patented inventions, providing progress is not obstructed by legislation tending to destroy the motive to invent. It is safe to say that better carpets may be seen to-day in the cottages of hard-working artisans than were found forty years ago in the houses of the wealthiest citizens; and this is due to the ingenuity called out by the incentives which Patents have presented, and continue to present. It is not the wealthy alone who are gainers by our Patent System, it is the masses who derive the greatest comforts from that source.

Before I leave the carpet, let me say that its greater durability is insured by a cheap patented lining, for different styles of which a dozen or two of Patents have been granted, and that the carpet is secured by Patent fastenings, on the pro-

duction of which much ingenuity has been expended; for Patents for these little devices can be counted by the score.

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Let us turn to the paper on the wall,—a paper of neat design, with ribbed and glazed surface studded with gilt sprigs. This is a home manufacture; for wall paper to the value of over a \$1,000,000 per year is produced in this city alone. The Patents for the manufacture of paper, and economizing its production, are innumerable. Patent after Patent has been granted for drying, glazing, printing, and other operations connected with wall paper; and the result of all this has been the permanent establishment of six large manufactories in this city. It would be impossible, in preparing a history of paper and paper manufacture, to separate it from the Patents which are contemporaneous with the improvements in this branch of industry.

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Then look at the stove,—an elegant, artistic affair, capable

of heating my large room, at an expense of a bucketful of coals per day. Compare this stove with the open fireplaces in which our fathers burnt cords of wood, or tons of coal, without obtaining a tithe of the heat which that ornamental structure generates. Compare it with the old anthracite stove of but thirty-five years ago. I saw one of these obsolete heat generators the other day, a hideous structure, with metal enough in its composition to make a cannon of small caliber,—metal enough to make four modern stoves of equal capacity.

There are, perhaps, more Patents for stoves than for any other class of inventions. A wonderful amount of ingenuity has been expended on these household necessities; and the result has been the establishment, all over the land, of manufactories, the products of which are a source of admiration to every foreigner who visits us.

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Let me point to a matter of less importance. There is a

picture on the wall, a steel engraving,—an art of which one of the greatest of American inventors and patentees, Jacob Perkins, was the father. In hanging the picture to the wall, I objected to the driving of nails, even if they were brass-headed, through the handsome wall-paper; and I objected to the ridiculous and disfiguring inclined cords, and to the clumsy knot which is usually employed to conceal the nail, but is always an eyesore, a useless excrescence. I looked for a remedy for all this in my list of Patents, and soon found it. I discovered a Patent moulding which would serve the twofold purpose of a finish for the wall-paper at its junction with the ceiling, and of a ledge, to which could be adapted a gilt hook; and I found patent plated wire cord, almost invisible, with which to suspend the picture from the hook. By these appliances, I am enabled to slide my picture laterally to any position desired, and I dispense with wall-mutilating nails, and clumsy

cords. All this, it may be said, is a small matter; but it is just such small matters as these which go to show how intimately Patents are connected even with what may appear to be trifling comforts, conveniences, and appearances. But I have not done with the picture yet. It has a gilt frame, consisting of a wooden moulding, to which the composition for receiving the gold is applied by a well-known process, forming the subject of an expired Patent, and which has reduced the cost of ordinary gilt frames to such an extent, that they are now to be found in the dwellings of the comparatively poor: whereas, twenty years ago, hand-made gilt frames were within the reach of the well-to-do only. Then there is the glass in front of the picture. It is only within a comparatively few years, that sheets of glass sufficiently large and clear for a picture-frame of moderate size have been produced in this country; and this production may be in a great measure attributed to

patented glass furnaces, and hosts of patented appliances connected with glass manufacture.

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But let us turn to objects of a more utilitarian character.

Immediately in front of me is an ordinary panelled and moulded door for a closet. A door like this, if made by hand, would cost just double the money for which a door of the same size and character, but of more accurate workmanship, can now be purchased at a large sash and door manufactory. This economy is attributable, in a great measure, and in the first instance, to Woodworth's Patent Wood-planing Machine, which was succeeded by many valuable improvements in the same class of machinery; but there are many other patented machines which have contributed to this economy of manufacture,—sawing-machines, tonguing and grooving machines, moulding machines, &c., for which Patent after Patent has been and continues to be granted. Pat-

ents for wood-working machinery may, in fact, be counted by the thousand.

There are two very important things, without which the door could not be completed; and these are glue and sand-paper. It may surprise many to know that Philadelphia can boast of the most extensive glue and sand-paper factory in the world. It is a factory in which one thousand hands are employed. The foundation of this gigantic establishment was based on a series of valuable Patents, on which the proprietors, by good judgment and enterprise, have built a superstructure of which this city may well be proud.

But let us look at the result of Patents in this case, as far as the public is concerned; for their value cannot be justly measured by the wealth which they bring to the patentees alone. It is but a comparatively few years since all the glue and sand-paper used in this country were imported: now they are made, owing to patented facilities, so economi-

cally, that much of the product of the factory in question is exported, while the home market is supplied at a cost less than half that which the imported materials cost a few years ago.

Sundry nails are used in the construction of the door. Compare the old costly hand-forged nails with the cut nails of the present day, which cost but little more than the metal plates from which they are made. As immense sums of money have been expended in perfecting nail-machines in this country, and hundreds of Patents have been granted for improvements, we must conclude that the incentive to the outlay and expenditure of ingenuity is to be found in the protection which Patents afford; and hence we may justly reason, that these cheap nails of to-day are due to our Patent System.

Then, again, the door is furnished with a lock such as is made in the large manufactories in New England and Pittsburg,—a lock that can be purchased at any hardware

store at less than one-third the price of one of the old hand-made locks of equal quality. The art of lock-making has made rapid advances in this country; superiority and economy of construction being the characteristics of our home-made locks. When we take into account the many hundreds of Patents which have been granted for locks, it will be evident that the progress of the manufacture is largely due to our Patent System.

The same remarks will apply to the hinges of the door, which are manufactured at rates which would astonish carpenters of thirty years ago, and the excellence and economy of which are due to patented machinery.

The celebrated patented machine which turns out complete hinges from crude brass plates and wire, automatically, is a marvel of ingenuity, and has resulted in supplying the market with hinges of superior quality at wonderfully low rates.

Lastly, we have the screws

by which the hinges are secured. The patented machines for producing these screws are numerous, and their production is rapid and economical. Take the Patent gimlet-pointed screw: what facilities it affords for the carpenter's operations! What tedious manipulation it dispenses with!

The houses of our artisans and laborers, the comfortable homes of our struggling Western farmers, are a source of admiration and astonishment to inquiring foreigners who visit our country. The cheap wood-work, and cheap building hardware, which enter into the composition of these dwellings, owe their existence to the thousands of Patents which have been granted for the articles themselves, and for the machines for the cheap production of the articles.

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Let us examine the desk on which I am writing. Both pen and penholder are patented; and very superior articles they are. It would be difficult to enumerate the

many patented processes to which the cheap and excellent paper on which I am writing owes its existence. The bottle of ink from which my ink-stand is supplied is marked patented, and so is the ink-stand itself. Many Patents have been granted for ink compositions, and hosts of Patents for inkstands,—some of them absurd and useless enough, it is true; but the failure of one patentee only instigates more successful ingenuity in another, until an article of excellent quality is produced, as in the present instance; for I would not exchange the inkstand on my desk for the most costly stand in the market.

Then I have patented pencils, with rubber attached, very useful instruments; a patented mucilage-reservoir, a cleanly and economical device, to be found in every stationer's store. There is a patented paper-weight, a very attractive, artistic affair; a patented sponge-cup on which to wipe my pen; letter-scales, a sensitive and ac-

curate instrument for weighing up to ten ounces,—an instrument, the low price of which would startle the scale-makers of fifteen or twenty years ago.

The very spectacles which enable me to write are patented, and are of home manufacture. A few words here about home-made spectacles will go to show the bearing of Patents on home industries.

Within the last two or three years, all our spectacles were imported; but Patents were recently granted in this country for a very ingenious method of graduating the tints of spectacle lenses. These Patents had, in the first instance, to be carried into effect in Europe; for there was in this country no glass of proper quality, no proper machinery for grinding lenses. But the spectacles were a success, were approved of by opticians and by all who used them; and the patentee soon found men to invest capital in the manufacture; so that to-day, there is in Reading a spectacle factory in full tide of success; the making of the

glass for the lenses, the grinding of these lenses, the manufacture of the frames, all being accomplished on the spot.

This is only one of the many instances within the writer's knowledge, of new industries introduced into this country on the strength of Patents. Not only are all our modern manufactures, with rare exceptions, based on Patents; but the liberality and justice of our Patent System have attracted to our shores thousands of ingenious and skilled artisans of foreign countries.

I could point out in this great manufacturing city factory after factory which owes its existence to Patents; I could point to thousands of artisans for whose skill Patents have created a demand, and whose future prosperity depends upon the permanency of our Patent System. Let Mr. Sayler, and others who would disturb Patent property by unwise legislation, remember this.

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There is on my table a package of beautifully made envel-

opes, manufactured at a cost but a fraction over that for which the excellent paper of which they are made can be purchased.

Let our supply of envelopes be restricted to such as are made by hand, and the public complaint would be loud and wide-spread. The grant of Patent after Patent for envelope machines and appliances has resulted in the production of these indispensable articles at a wonderfully low figure.

Then there are the pins, eyelets, and other indispensable accessories of a writing-desk ; and there is the device for wetting postage-stamps, — an instrument, which, I am willing to admit, I have discarded for the well-known primitive plan. This may be looked upon as an over-invention ; but the device displays the exhibition of considerable ingenuity, which will, doubtless, find a more profitable and serviceable outlet in future.

As for the pins, let us remember that a paper of these cost, in 1812, one dollar ; and

that the pins were much inferior in quality to those which can now be purchased for six cents a paper ; that the cost of pins since 1835 has been reduced one-half, while the quality has been improved in an equal ratio ; and that from seven to ten tons per week are now made in this country. The Patented machines for manufacturing pins, and sticking them into papers, are wonders of modern ingenuity, the result of a succession of inventions and of numerous Patents, the acquisition of which instigated the inventors, and created that spirit of industrial rivalry which always tends to the advantage of the public.

As for the eyelets and eyelet-machines, for which there are so many Patents, their utility is not confined to the securing of papers. Some estimate of the widespread advantages of these little metal fastenings can be derived by inquiring what our wives and daughters could do without them in these days. Machines for making eyelets, and for eyeleting fab-

rics, are numerous, and are the result of the expenditure of much ingenuity, and of the reward which Patents held out to those who succeeded best in this line of industry.

Let us look at the furniture in the room. There is a Patent sofa, covered with a Patent fabric. There are numbers of chairs of elegant design, but comparatively cheap, owing to the Patented machinery which has been brought to bear on their manufacture. The very stuffing for the cushions is prepared by a patented process. If we examine that comfortable reclining-chair, the subject of half a dozen Patents, and compare it with the straight-backed abortions on which our grandfathers were content to prop themselves up, we shall conclude that Patents have had a good deal to do with the modern comfort, which is one of the best indications of the advancement of civilization.

Then there are the Patent casters on the furniture. Hundreds of Patents have been

obtained for these indispensable adjuncts; and, judging from the accidents which have occurred to many of my own casters, I should say there is plenty of room for improvement, and for the mental labor of those ingenious men who are looking about for subjects on which to expend their inventive talents.

There is my pipe. I may be pardoned for alluding to it, when I say that it is to me quite as much an article of necessity as a luxury. It has a meerschaum bowl with a Patent stem; and let me say, that this Patent stem permits me to smoke common tobacco with more enjoyment than the most costly Havana cigar.

The very cloths which cover my tables have been beautifully and cheaply embroidered at the edge by automatic machinery. Then there is a Patent adjustable table for drawing, or for holding large books at a proper inclination.

There are the window-blinds with patented spring rollers, enabling me to dispense with

the well-known nuisances, cords and pulleys, which invariably get out of order at the most inopportune junctures.

There are two fine framed photographs, made in accordance with patented processes, and two photo-lithographs, the excellence of which is due to several patented inventions. The rapid growth of photography and photo-lithography cannot be contemplated by any thinking man, without wonder and admiration, and without thanking the Almighty that he has been permitted to live in an age when such wondrous progress has been made in the fine arts, and such facilities have been brought to light for the dissemination of knowledge, as photography and photo-lithography afford. Compare the wretched daubs which appeared on the walls of our well-to-do citizens of twenty years ago with the pictures to be found to-day in the cottages of the poor. Compare the chimney ornaments of our childhood, the green dogs and crimson cats of pottery-ware, the

plaster casts of impossible men and women, with the chaste and truthful ornaments which can now be procured at remarkably low prices. Look at our children's toys, and compare them with the contents of the miniature representations of Noah's ark of but a few years past,—contents which would appear to have been designed with a view of distorting the imagination of the rising generation, by making all the animals of one size.

The rapid advancement of the fine arts within a comparatively few years must be attributed to the popular taste for the true and beautiful, which photography has created. While the earliest efforts in this direction may be charged to philosophers and experimentalists, the advancement of the art is due to the hundreds of Patents for valuable improvements, and to the spirit of emulation which Patents stimulated.

There are the chandeliers and gas-fixtures. I am not going to make comparisons be-

tween our illuminating gas and the tallow candles of our forefathers. I would simply point out the excellency of the workmanship of those fixtures,—a workmanship due to patented machinery, processes, and appliances ; and I would point to the Patent tips, which insure a flame exactly suited to my purposes ; and to the patented mica reflecting-shades, to be deprived of which I should look upon as one of the greatest of hardships.

Then let us contemplate the books in my cases, an amount of literature furnished at a cost which would have astonished our forefathers ; all due to patented improvements in paper manufacture, patented printing processes and machinery, improvements in book-binding, patented folding-machines, and hosts of inventions, to enumerate which would require page after page of printed matter.

The foregoing remarks have been restricted to objects in one room ; and let me say that I have by no means exhausted the articles with which Patents

are intimately connected in that room. There are subjects enough left to enable me to continue my observations to a very tedious length.

If I go to a bedroom, new objects present themselves ; different patented articles in the parlor, a new set of appliances in the dining-room, and totally different instruments in the kitchen, all bearing the stamp " Patent," or produced by patented machines or processes.

( We cannot make a movement without touching a patented article. Asleep or awake, we are surrounded by Patents. They attach themselves to all our duties, studies, and recreations ; they accompany us in our travels on foot, in vehicles, by railroad, or by steamboat ; they cling to us in the shape of clothing and jewelry ; they enter into remedies for our diseases ; and we have the cold comfort of knowing that they accompany us to the grave in the shape of patented coffins. We cannot get clear of them. )

If we desire to know the history of the rise and progress of any art or manufacture, the true history can only be determined by that of the Patents connected with it.

(As I said in the outset, Patents are so allied to the progress of the useful arts, are so intimately interwoven with our duties, welfare, comforts, and enjoyments, with our whole social system, that any attempt to tamper with them by legislation which will tend to lessen their value must be disastrous in its consequences.)

(I have said enough to show how far we are indebted in the past to Patents for our manufacturing supremacy, for our present social advantages, for the advanced state of the arts, for comforts our grandfathers would have looked upon as impossibilities.) What have we to expect from the same source in future?

No less than 12,864 Patents were granted by our government in the year 1873; very many, the majority perhaps, for articles, machines, or pro-

cesses possessing but few, if any, advantages; others exhibiting marked improvements in the arts to which they relate; and others, of a startling character, presenting unlooked-for benefits. But who can calculate the aggregate benefit to the public from this mass of Patents granted during one year? No one can measure it; for no one can penetrate so far into the future as to determine what important part many of these patented inventions may play in the future manufacturing history and progress of our country. We know by the past, that, so long as our Patent System retains its integrity, the incentive to invent must continue: if that integrity is retained in future, there must be a constant and restless spirit of rivalry to excel in the industrial arts, repeated exhibitions of originality, a thirst for innovation, stimulated by the temporary profit and manufacturing advantages derived from the possession of Patents for the limited term allowed by the law.

## RECKLESS MAKING AND UN- MAKING OF PATENT LAWS.

Periodical attacks are made in Congress against Patents and the Patent System; and now we have a legislator who publicly overestimates the value of Patents and Patent property, and declares that an average of over fifty per cent is derived from patented manufactures, whereas fifteen per cent is the highest average. This legislator will not look into the past, and compare the profits derived from inventions with the benefits which have accrued to the public at large from the same source.

If it were possible to calculate the sums over and above ordinary manufacturers' profits, which the public has paid for patented articles during the last twenty years, and then to compare the comforts, advantages, and improved social condition resulting from these patented improvements, we should conclude that the public has had the best of the bargain, and that the reward of the in-

ventors is an inconsiderable trifle.

Is this exchange between inventors and the public, an exchange so profitable to the latter, to be arrested by reckless legislation?

Judging from the bills now before Congress, there would appear to be a formidable attempt on the part of some obstructionists to wound our manufacturing supremacy at its most vital point. They would attack our well-tried Patent System, on which that supremacy is based, and on which our children must rely for the continuance of that progress, the stoppage of which means retrogression.

Mr. Sayler's House Bill, No. 1392, proposes to allow any one to manufacture, use, or sell any patented machine or other article, by paying to the patentee a royalty of ten per cent on the market value of such machine or article; the royalty never to be less than twenty-five cents.

In other words, Mr. Sayler would give to an inventor a Pat-

ent burdened with restrictions which takes away its value,—a species of property against which human nature revolts.

Make a child a present accompanied with arbitrary restrictions as to its use and as to the mode in which he shall share it with others. He may take the first present ; but, if he is the child we like to see,—a child with a spirit of independence,—the weight of the restrictions will induce him to refuse a second present of like character.

So it is with an inventor. Give him his Patent as property which he can retain or dispose of as best he likes, a property the reward of his ingenuity, and he will prosecute his invention, make it available to the public, invite capital to carry it out (when capital is needed), and will pursue the course which has heretofore been pursued by inventors, with the result the advantages of which are displayed by all our surroundings.

But weigh down a Patent with Mr. Sayler's arbitrary restrictions, and what would be

the consequences ? In the first place, how many inventors would accept Patents on the terms proposed ? Very few wise ones ; and it is wise inventors on whom we rely for future advancement of the arts equal to that which has prevailed in the past.

And if the inventor takes this Patent, this property, which is no property at all, where will he find the capitalists to aid him ?

This measure of Mr. Sayler's would amount to a total abolition of Patents, to the uprooting of our Patent System, and to the disorganization of the entire manufacturing interests of the country.

Let us look into Mr. Sayler's singular mode of rewarding inventors. He would not destroy Patents ; but he would reward patentees in a new way,—a way of his own. There is a patented machine for cutting saw-teeth, built at a cost of \$300. It works so rapidly and effectually, that about ten machines will supply the demand of all the manufacturers of the

country. According to Mr. Sayler's mode of remuneration, all the reward the inventor could receive would be \$300. On the other hand, there is the patentee of a combined tooth-pick and pen-holder, who sells the articles at the corner of the street, for ten cents each. If I feel anxious to sell the same kind of article, I must pay the patentee twenty-five cents for every ten cents I receive. Remuneration admirable for its equality and foresight.

Then, again, Mr. Sayler's bill provides for the payment for the use of a machine in the construction of which one or several Patents are combined, by making the amount to be paid subject to the decisions of the courts. What an eruption of litigation this measure implies! There is ample provision here for the benefit of lawyers, but very little comfort, either for the patentee, or those who desire to purchase.

The House Bill, No. 1757, of Mr. Kasson, would empower the Commissioner of Patents to license any person to use a

patented machine on payment of a royalty of — per cent upon the actual cost of manufacture.

This is, if any thing, worse than Mr. Sayler's bill; for it saddles the Patent Office with most laborious duties.

The same bill, moreover, prohibits the extension of a Patent under any circumstances,— a measure the advisability of which may well be questioned in view of the fact, of which the history of inventions affords ample proof, that many inventors derive no benefit from their exertions until towards the expiry of their Patents.

Another member of Congress, Mr. Killinger, takes an entirely different view of the matter; for his bill (872) provides for the extension of any Patent on payment by the patentee of a fee of \$100, without any inquiry as to the validity of the Patent,— a measure which would appear to be unjust to the public.

But it is to Mr. Sayler's bill especially that I wish to direct

attention. (The author most certainly had in his mind some evil to be remedied by his proposition. Judging from his speech, this evil consisted simply of the fraudulent acts of a set of Western Patent peddlers, whose practice it is to levy on farmers and others, either by inducing them to purchase some worthless patented trap, or by mulcting them for supposed infringements on Patents which they own, or are hired to peddle. Under threats of prosecution before the United States Courts, these fellows collect small sums from farmers, who are not able to distinguish Patents with broad claims, from those with narrow claims, or are unwilling to make inquiries by which their rights can be determined.)

(It is very true that a set of Patent-hawking impostors infest not only the Western, but the Eastern and Southern States, and prey upon the unwary and ignorant of all sections. They are the parasites of our Patent System, and cast the same taint on it that un-

scrupulous hypocrites do on our churches,) but are we to get rid of these black sheep by uprooting our churches? The proper plan is to legislate against the parasites who attach themselves to our best institutions, not to demolish the institutions in order to insure the destruction of the parasites. But do these Patent hawkers cause such mischief as to call for legislative interference? Their fraudulent proceedings can only be available with the ignorant and careless. A member of Congress very properly suggested to Mr. Sayler that it would be best to legislate brains into the victims of these men.

We cannot legislate impostors from the face of the earth. In the wisest law of man's designing, in the most salutary and carefully worded enactment, your cunning rascal will find an opening for the practice of his rascality, or he will invent a new knavery to meet the difficulties which the law presents.

Are there any more knaves

among inventors and those interested or dealing in Patents, than in other classes of the community?

I think I could point to other classes containing men infinitely more dangerous to the public than the most unscrupulous Patent peddler you can find. The very man who complains so loudly about the deceptions of a Patent dealer, or dealer in patented articles, may be the victim of a selfish pettifogger, or of an ignorant quack who has stolen the name of doctor; or he may be in the habit of dosing himself with nostrums, which, by a wise dispensation of Providence, generally contain ingredients of a character quite as harmless as they are useless, and which now and then may effect a cure, not by any ameliorating relation they bear to any disease, but by the confidence and enthusiasm which the flaming advertisements and bogus testimonials create in the mind.

The attacks of Mr. Sayler and other legislators, although ostensibly directed against the

manufacturers and sellers of patented articles, are, in reality, assaults against inventors and patentees,—the very men of all others who need the fostering care and guardianship of the government.

The majority of these men are simple minded, engaged in absorbing occupations, credulous, and easy victims of the pretentious and incompetent solicitor on the one hand, or of cunning or unscrupulous speculators on the other. (The true way to remedy the difficulties which accompany the fraudulent acts of Patent peddlers is to educate the people to a point which will enable them to resist all attempts at fraud; and this is just what the authorities of the Patent Office are doing by the issue of "The Official Gazette," the increased circulation of which, with its weekly decisions, must soon impart to the community a Patent education, which will render the occupation of these wandering pirates unprofitable.

(Let this Patent Office literature be increased to the extent

which the commissioner desires, and we shall soon have such a widespread knowledge of Patents and Patent property, that the proposed purchaser will take the same prudent steps for his security as he would in purchasing lands or merchandise.

Let this literature supplant the pamphlets and periodicals published ostensibly to give information to inventors, and in the interests of science and useful arts, but really as adjuncts to Patent soliciting or Patent speculating establishments, and there will be fewer complaints of the victimizing of inventors.

The attacks of our legislators upon the Patent System appear to be founded on two suppositions: first, that we are paying too much for patented articles of manufacture, or articles made by patented machinery, and, second, that this is chargeable to inventors, patentees, and manufacturers of patented goods. We are paying too much for all sorts of articles, patented and not pat-

ented, a subject to which we shall have to refer more fully under the head, "*Where the money goes;*" but why legislators should jump at the throats of inventors, and declare them to be the guilty cause, it is difficult to understand.

The tendency of Patents from the first, as we have already seen, has been to economize manufacture, to cheapen articles of utility and luxury, to place us in possession of things undreamed of before, to render the artisan's home of to-day more comfortable and attractive than the wealthy man's residence of fifty years ago.

Let us take a single example, a familiar article of manufacture, a hand-saw. Pick up a saw in any part of the United States, and the chances are, that you find on it the trademark of well-known manufacturers. Ask the user of that saw about the instrument, and he will tell you that it is the best tool of its kind in the country.

To the uninitiated, it looks

like any ordinary saw; but it is, nevertheless, the subject of Patents relating to important features in its construction; and thousands of dollars have been spent in patented machinery for facilitating, perfecting, and economizing the manufacture of these saws. As this superior tool is comparatively cheap, the question arises, How can the manufacturers afford to sell so superior an article at so low a rate? Because they have the sole right, under sundry Letters Patent, of making saws of this style; because the knowledge that the Patents secure them in this right for a number of years encouraged the manufacturers to invest large sums of money in machinery and appliances for economizing the production of these saws. Thus the benefit of a supply to our artisans of indispensable tools of a superior quality, and at a cheap rate, may be traced directly to our Patent System. But this is not all.

It is but a few years since all the saws used in this coun-

try were imported from England; and now we have in this city the largest saw-works in the world, where constant employment is given to nearly a thousand hands. The rise and progress of this magnificent establishment is, of course, due to the enterprise and energy of the proprietors, and to the invariable excellence of their workmanship; but they will be the first to acknowledge the aid which they have derived from Patents in the prosecution of their business.

This is but a solitary instance of the beneficial effects of our Patent System. There is scarcely an article within our reach which does not owe its cheapness or superiority to Patents; and hosts of articles owe their very existence to the encouragement which Patents hold out to ingenious men.

Almost every day, new branches of industry are started on the strength of Patents, and new employment found for our artisans.

Our legislators know that it costs a given sum to manufac-

ture a certain patented article ; they know what it costs to purchase it. They are astounded at the difference between the cost of manufacture, and the retail price ; and they at once attack the patentee, and charge him with the absorption of a profit of over fifty per cent,—a most short-sighted and unjust conclusion. By whom, then, are the large profits absorbed ? We propose to discuss this point under the next head.

#### WHERE DOES THE MONEY GO ?

If Mr. Sayler, or any other member of Congress who feels disposed to attack patentees, is really anxious to find a true solution to this question, we can point out a very easy mode of doing so. Let him take a walk along Pennsylvania Avenue, and purchase, at different stores, a miscellaneous collection of home-made articles, patented or not patented, or, for the matter of that, articles bearing the stamps of foreign manufacturers (for millions of dollars' worth of goods really made in our manufacturing

districts are sold as imported articles). Unfortunately there are very many purchasers who believe in the super-excellence of foreign-made goods, and are easily persuaded, by unscrupulous tradesmen, to pay a high price for articles under the pretence that they are imported.

Having carefully collected his purchases, and noted the cost of each, let our member of Congress proceed to trace each article to its origin, compare the manufacturer's charges with the retail price, and he will find the correct answer to his question.

While the profits of manufacturers in this country are but little, if any, in excess of those of France, England, or Germany, it costs our citizens at least twice as much to get possession, through jobbers and tradesmen, of the products of our factories as it does a Frenchman or Englishman to purchase the goods made by his countrymen. This has been often remarked by intelligent foreigners who have visit-

ed or become domiciled among us, and by our own observant citizens who have travelled abroad.

Take an ordinary London or Paris retail store, stocked, say, with eight or ten thousand dollars' worth of standard goods, and you will find the shopkeeper and his family living contentedly in the rooms above the store; the sons and daughters being the attendants.

But let us transplant this store, with the same stock of the same standard goods, to any of our larger cities, and note what a change takes place.

The other day, wanting a dozen brass hinges of a given size, I visited a moderately well-stocked store, and purchased them at the price of twenty-five cents per pair.

The hinges were of superior quality, and cheaper than the brass hinges of similar size on sale ten or fifteen years ago. I knew that this superiority of the hinges was due to a very ingenious patented machine referred to in another chapter; and I also knew that the manu-

facturer, owing to the monopoly which his Patent guaranteed to him, and to the enormous demand for the articles, could realize a handsome profit by charging for the manufactured goods a trifle in advance of the cost of the metal of which the hinges were composed. Curiosity led me to inquire as to the manufacturer's price for these hinges; and I found that I had paid the storekeeper for them from four to five hundred per cent more than the manufacturer's price,—an increase utterly disproportionate to the capital, in money or in brains, required for the mere transmission of the goods from the maker to the consumer.

I bought a pair of fancy stockings for a child. I was unblushingly told that they were an imported article, when I knew very well that they were made by patented machinery in a factory not a mile from the store where I purchased the articles at a cost three times that charged by the manufacturer. And so it is throughout our entire trading

system: even a paper of tobacco, in going from the manufacturer on one side of a street to the retailer on the opposite side, increases twofold in price.

There are many articles which can be purchased at a reasonably low rate. A steam-engine, for instance, bought directly from the manufacturers, or smaller articles made in the stores where they are sold, can be bought cheaply; but, when the jobber and retail tradesman intervene, articles of every day demand are sold at double, treble, and often quadruple, the manufacturer's charges.

The conditions attending the growth of this country appear to have given peculiar importance to the tradesman, and to have caused to be centred upon trading pursuits a perhaps excessive degree of attention. Every reader of history is familiar with the circumstances which in colonial days stifled every effort to establish manufactures; and those still living among us have had personal knowledge of the events —

some of external, some of internal origin — which have in later times tended to impede the progress of the practical arts among us. A people of enterprising and original genius, possessing a land peculiarly blessed in the character and multiplicity of its natural products, and the ease with which these products may be secured to the use of man, found the most obvious and ready source of profit in supplying these products to the people of countries less favored by Nature.

At the same time, there was not the crowded population, nor the abundance and consequent cheapness of labor, most favorable to economy of manufacture when carried on by hand. In these respects, and in the possession of artificers whose skill was the inheritance of successive generations, the older countries of Europe had material advantages.

To an institution now happily among the things of the past, but which, while and wherever it prevailed, tended

as much to the degradation of manual labor as it did to the apparent dignity and actual power of landed proprietorship, we need make no more than a passing allusion.

Suffice it to say, that the Revolution found the people of this country situated in the midst of natural abundance, without extremes of wealth or poverty, and with habits and tastes quite as cultured and refined as those prevailing among the prosperous classes in European countries. Among these people, their own easy circumstances, and constant mercantile and social intercourse with foreign lands, had bred a lively demand for most of the known conveniences and luxuries of civilized life.

For these they had been habitually, though in a large measure against their will, dependent upon foreign artisans: their attention had perforce been mainly divided between agricultural and trading pursuits. Handicrafts were of course established among them, such mainly as are essential to

the supply of every-day wants; but manufactures as a source of natural wealth had been little more than dreamed of, and, where the obvious natural facilities had prompted their establishment, they had been speedily stamped out by the jealousy of the mother-country.

The traders or factors had a recognized standing and importance in the community: they formed the communication between the foreign artisan and the native consumer. Later, rapid as was the progress of the useful arts, the extension of commerce was infinitely more so; and industry and capital naturally flowed into the channels promising the most easy and speedy reward. While the history of manufacturing progress has been that of a continued struggle against adverse conditions,—a struggle which only indomitable ingenuity and energy could have maintained successfully,—that of the development of commerce displays a career in which the periodical phases of adversity have but been the consequence

of a blind recklessness begotten of excessive prosperity.

The circumstances which tended to this rapid extension of commerce would seem to have operated far more tardily upon manufacturing progress.

The opening up of the vast and rich Western territories offered irresistible inducements to the restless and enterprising youth of the older States, and to the better class of emigrants from abroad. New fields of commerce were thus rapidly opened. The emigrants carried with them habits and tastes acquired among older communities ; and though these would, of course, be more or less modified under the new conditions, it was more consonant with the mental energy of the people to subdue and mould the new conditions into the nearest possible correspondence with the old. So the trader formed the connecting link between these pioneers of a new civilization and that which they had left behind them.

Towns sprang up in the wilderness ; and these towns were

essentially trading communities.

In the mean while, mechanical ingenuity accumulated. Capital and cheap labor had operated in the manufacturing countries of Europe, and notably in England, to bring the practical arts to a degree of excellence both as regards quality, and economy in production, with which, chiefly from the scarcity and value of labor, it seemed impossible to compete here. Thus it was that our ever-increasing trade became more and more tributary to the foreign manufacturer ; and that, with our ever-expanding demand, and consequent prospect of gain, there was an ever-increasing army of traders, merchants, and storekeepers, great and small, between the foreign manufacturer and the native consumer of his wares.

In this connection, too, another circumstance, tending at once to the advancement of commerce, and the temporary repression of manufacturers, must not be lost sight of. We refer to the superabundance,

with which our country is blessed, of certain natural products which other countries must need.

Raw materials for manufacturing we had in unrivalled plenty; the facilities and labor for manufacturing we lacked, while other countries had them in excess. To export these raw materials was a ready and ever-growing field of gain for the trader.

We do not mean to assert, that, during this time, there was lack of development in the practical arts: on the contrary, their progress, viewed by itself, or in connection with the surrounding circumstances, was wonderful. But attention is directed to the fact, that this progress, as compared with the wonderful expansion of commerce, was slow and uncertain; that it was so in spite of certain adverse conditions; and that, in the merely commercial habits of the people, it perhaps found less of an ally than an obstacle.

Trade presented the surest and most profitable invest-

ments for wealth: manufacturing offered harder work, and more uncertain profits.)

(Trade flourished apace with the growth and constantly-developing wealth of the country: manufacturing needed the fostering aid of government.)

(Under such circumstances, it is not to be wondered at if the spirit of the people at large became essentially a trading-spirit, or if the average youth preferred those employments which promised the least amount of real mental labor.)

To these causes we are almost ashamed to add another, which those among whom it chiefly exists would probably be the first to deny. We refer to the preference of trading-occupations, owing to their presumed respectability. With all that is being constantly said or written about the dignity of labor, what a general aversion there is to the external signs of physical work! to how large a portion of the public is the mechanic associated only with the idea of grime and grease! and how many fond mothers

and short-sighted fathers prefer for their children the mediocre respectability and ease of storekeeping to the hard work and attendant grime of mechanical pursuits! It would be needless to dilate on this subject: it is a matter of taste, to dispute which is an unprofitable and ungrateful task; attention is drawn to it as one, and not the least, of the many causes which have tended to popularize trading pursuits.

Nor should the importance of these pursuits, or the energy and activity to be found among those who follow them, be underrated. He would be a bold man, however, who should assert that trading, as such, does or can expand the faculties of mind and heart in any thing like the same degree as those occupations which call into play the observing and creative faculties. Napoleon's well-known fling at the English as a nation of shopkeepers, had it been true, might, perhaps, have been just; but, unfortunately for its point, it was uttered just about the

time when that spirit of originality and creativeness (least characteristic of shopkeeping) was commencing to display its greatest activity among the English.

In commerce, given its widest signification, and viewed as a science, there is room for the exercise of the best faculties of the mind; but the same will hardly be claimed for mere internal or local trading, the mere intervention between manufacturer and customer. This is the branch of commerce, however, in which the multitude of traders are everywhere engaged, and the branch which, by force of the circumstances which we have narrated, has chiefly prevailed in this country. It is this class of traders which mould our commerce, and through whose hands pass the floating wealth of the country. Their numbers, wealth, and power are constantly increasing; and they retain, in these days of ready communication, and of increased and constantly-increasing native industry, a position to which

they are, perhaps, not so well entitled as in days gone by.

As domestic manufacturers grow, and become more widely disseminated, and maker and consumer come more within each other's reach, the importance of these middle-men must decrease. In the mean while, long-established custom prevails, and their asserted rights are acknowledged, though the necessity for them has ceased.

They stand between domestic manufacturers and consumers, as they have been accustomed to stand between the latter and foreign manufacturers ; and so well established is their power, so much wealth have they engrossed, that they are too frequently able to dictate both to manufacturer and consumer the terms upon which goods shall be transmitted from one to the other. And this state of affairs is aided and aggravated by the vicious system of trading known as long credit, the burden of which falls ultimately upon the consumer by adding to the price of goods the interest which

long credit implies. These, and not the greed of inventors, patentees, and manufacturers, are the causes of those exorbitant prices of manufactured articles which are so bitterly complained of. The true remedy is the dissemination of manufactures, the establishment of the factory as near as possible to the consumers, and the consequent narrowing and simplifying of trade. Whether this desirable end is more likely to be attained or obstructed by our Patent System, let past history, and the present gradual establishment of manufacturing in the Western States, attest.

It would be well for our legislators to direct their attention to the Western jobbers, or commission merchants, who league together, and, like nabobs, determine what they will pay for manufactured articles, and on what terms they will deliver them to the retailers. So oppressive have the acts of these men become, that manufacturers have established, and continue to establish, at differ-

ent cities, branch depots for the delivery of goods directly to the retailer, — an effective remedy, which must result in the greatest advantage to the public.

A spirit of economy has induced the consumer to purchase directly from the manufacturers wherever it is possible to do so ; and this must continue, until the occupation of the grasping middle-men must cease, or they be content to accept profits adequate to the amount of intelligence and capital which they have invested in the business.

Farmers and others in the West have been taught to believe that manufacturers of Patent machines realize a profit of over fifty per cent ; and to this belief is due the sudden fit of crude Patent legislation.

It is an unfounded report, followed by the usual mischievous result of creating that antagonism between different sections of the community, which always ends in attempts at disastrous class legislation.

The price paid for many patented machines is well

known to be much in excess of the cost of production ; and unthinking purchasers charge this excess to manufacturers' profits, — a most erroneous conclusion. They forget the sellers, the merchants, the middle-men ; they forget the cost of introducing a new invention, the cost of insuring a permanent market by advertising, &c., and of maintaining expensive establishments and salesrooms at points miles the away from manufactories.

Take sewing-machines, for instance. The manufacturers of these machines have been over and over again charged with making princely profits at the expense of the purchasers : whereas the cost of selling these machines amounts to quite as much as, or even more than, the cost of production.

There is not a sewing-machine manufacturer who would not be willing to furnish machines at half their present cost, if all purchasers would consent to fetch them from the factory, or if they could be deposited in hardware stores for

sale, like apple-paring and other domestic machines. But purchasers of sewing-machines expect to be taught their use in well-appointed stores and show-rooms; and, at distant points, they expect the machines to be brought to their doors by men who can demonstrate the mode of operating them. Such indulgences as these cannot be obtained without payment.

It is the same with hosts of other labor-saving machines which are the subjects of Patents, or the products of patented machinery. And let it be said here, that these travelling sellers of patented machines are not always to be despised.

Many a farmer located at a distant, out-of-the-way place, has to thank the day that brought to his doors the honest peddler of a labor-saving machine, which, but for the trader's enterprise, would, perhaps, have never been known to him. While the dishonest hawker is a curse everywhere, the honorable peddler is a blessing in distant, sparsely-

settled sections of the country.

But to return to sewing-machines. They appear to have been pointed out as special objects of attack by Patent obstructionists. It will scarcely do to hazard the assertion, that, but for Patents, there would have been no sewing-machines. But the excellence and economy of modern machinery depends upon the amount of capital invested in it, and this capital can never be invested without the security which Patents afford.

Sewing-machines might have existed in the absence of Patents; but how far they would have progressed beyond the original machine, which was about the size of a hand-cart, it is difficult to say.

Certainly the manufacture of these machines would have been in the hands of tinkers, small machinists, and blacksmiths. No two machines would have been alike. There would have been no such beautiful sewing-machines as those of to-day.

The superiority and economy of our labor-saving machines are acknowledged throughout the world ; and these have been reached by ingenuity stimulated by Patents. We are told by Mr. Brassy, an eminent author, and member of parliament, that we Americans " with our high wages, and our high cost of living, have, by our labor-saving machinery, driven out of the foreign markets some of the most important trades ; " all of which is due to the investment of large capital, which insures cheap production,—investment which Patents induce.

If the cost of selling could be reduced in proportion to the continued lowering of the cost of production, which is due to our Patent System, we should be the possessors of the cheapest articles of manufacture in the world ; we should have fewer idle young men, whose senses have been blunted by uncongenial employment ; and industrial occupations would be looked upon as the most ennobling of all professions.

The answer to the question

at the head of this chapter is simply this : That the enormous profits paid for manufactured articles by the consumer, over and above the cost of production, are chargeable, not to the manufacturers, inventors, or patentees, but to the grasping demands of non-producing middle-men. >

#### VALUELESS PATENTS.

Another line of attack against our Patent System is based on the fact that the majority of patents are granted for things of little or no value to the community.

True, a weak Patent, or a Patent for a valueless article, may be used for a bad purpose ; but where is the Patent that does not carry with it its lesson ?

Inventors are like the rest of mankind in this respect,— that the minority succeed, while the majority fail. Ask any man who has gained an eminent and enviable position, what trials and disappointments he had to undergo, what energy he had to exercise in order to

reach that position. These are the men who create that spirit of emulation among the majority, without which the world would turn back on its hinges. It is this spirit of emulation which raises men from the ranks of the majority to fill the gaps in those of the minority.

So it is with inventors. The success of one stimulates another, who may fail in his endeavors in the first instance ; but this very failure is one of the trials that urges him to renewed efforts, which, if he is a real inventor, must eventually result in success.

Another may think he is an inventor when he is not. Failure, in this case, is the lesson to teach him that he has mistaken his vocation. A third may yield under the first disappointment, and give up in disgust. He belongs to the majority, and was never intended to reach the ranks of the minority.

But what business has the government to grant Patents for things which are of no public value ? This is another cry

of those who would attack the integrity of our Patent System.

Is the application of John Jones for a Patent to be met by a refusal like this from a government officer, "Your machine will not work half as well as that for which we granted a Patent to John Brown week before last: you cannot have a patent" ? Such a practice as this, if permitted to prevail, would convert the Patent Office into an inquisitorial star chamber, a disgrace to any despotic government.

The present policy is the true one. If an inventor presents an application for a Patent for an invention having any claim to novelty, if it exhibits ingenuity, if it will perform the duty claimed for it, let the man have his Patent, whether, in the examiner's opinion, it will or will not do the duty better than preceding inventions, or whether or not it is more valuable in a marketable point of view. The policy of our government is to give every inventor a chance ; for, however frivolous inventions may appear at first

sight, they often lead to success: an invention which appears trifling to-day may prove of immense value to-morrow. Far better flood the country with Patents of little or no value than attempt to arrest the inventive progress of the community by arbitrary measures which would disgrace our free institutions.

#### ABOUT INVENTORS.

(Then, again, the opinion is by no means uncommon that inventors are a pampered class, set apart by the government for special indulgences and privileges. A more absurd mistake than this could not prevail. The government has established laws for the protection of property in invention, precisely as it has for the security of other property, and for precisely the same purpose; that is, for the welfare of the community at large, not for the special benefit of individuals.)

The inventor does not ask for indulgences: the law places him above the character of a beggar for government patron-

age. He goes to the proper department, and says, "I have an invention. It is my property, for I can keep it to myself; but I want the property secured by the grant of a Patent for seventeen years, so that I can practise the invention publicly, and make the most of it during that term. Here are the papers to instruct the public how to work the invention, and reap all the benefit from it when my term expires; and here are the fees to enable you to make such searches as are necessary for you to decide whether the property is really mine or not." The government must comply with his demand, and must decide whether or not the invention is already the property of the public, or of a prior inventor. If it is not, and the applicant is otherwise legally entitled to protection, the Patent must be granted.

The whole affair is a plain business transaction. There is no sentimentality about it, no humble petitioning for special favors on the one side, no exhibitions of lofty patronage on

the other. The seal of the Patent is the sealing of a bargain between the inventor on one side, and the government, as agent for the public, on the other.

If the invention is a valuable one, the public get the best of the bargain. If it proves to be of little or no real marketable value, it sinks into oblivion.

Of course, the government cannot guarantee the validity of the Patent. The possession of a title deed does not preclude the possibility of questions of right. The inventor's title deed is his Patent ; and it is presumptive evidence of his right to all he claims in that Patent, and nothing more.

How often do we hear the remark, "What a lucky man that is to hit upon such a profitable invention !" I will admit that a man of no ability may accidentally discover a valuable improvement, just as a lazy gold-miner with no more brains than a tadpole may discover a nugget. But these are exceptional cases. No greater mis-

take can be made than to suppose an inventor's career to be one of continued ease and profit. I have been among inventors for thirty years ; and I can say that very few members of the community work as hard as they do.

Their gains are rarely commensurate with their exertions, and still more rarely commensurate with the benefits they impart to the community.

#### ATTACKS ON THE PATENT OFFICE.

It must be remembered that comparatively few inventors are familiar with Patent matters, or understand their true status as regards the public, and prior inventors : hence they very naturally charge all their disappointments to the inefficiency or short-comings of the officers of the Patent Office.

Then, again, there is a small army of solicitors who advertise themselves as especially qualified to aid inventors in procuring Patents, and who offer all sorts of inducements to secure patronage.

Candidates for the medical and legal professions must pass through a course of study, and through an examination; but we know, that, in the ranks of these professions, there are many incompetent and unscrupulous members.

The profession of a Patent solicitor is one demanding varied accomplishments and experience; but any one can announce himself as qualified for the profession. He undergoes no examination as to his qualifications. His previous training, his mechanical, legal, or scientific attainments, are never inquired into: he simply adopts the title of Patent Solicitor or Patent Attorney, and on the strength of this title demands the confidence of inventors.

In a profession so easy to enter as this, we must naturally expect a greater proportion of incompetents than in the learned professions, admission to which is dependent upon a previous course of study, and successful examination.

Of course, the disputes be-

tween the Patent Office and unskilled or reckless attorneys must be constant; and such attorneys, to relieve themselves from the charges of incompetency, and disguise their own shortcomings, abuse the Patent Office authorities to their clients.

To such an extent have the misrepresentations been carried, that inexperienced inventors, and those members of the public who have neither the time nor inclination to investigate the subject thoroughly, have been educated to believe that the Patent Office is a tyrannical institution, where incompetency, mismanagement, and favoritism prevail.

The authorities of the Patent Office cannot reply to these charges: hence the public hears but one side of the question.

It would be surprising indeed, if, among the multitude of officers in the Patent Office, every man should be qualified for his position. Men with erroneous notions of their duties, and with a tendency to treat inventors illiberally, must al-

ways be found among the examiners; but they are exceptions, and in time either change their views, or are permitted to find some other employment.

The Patent Office is as well officered as any other government bureau. It is surprising, in fact, that so many accomplished men can be found in positions the salaries attached to which are by no means large.

The rules of the Patent Office may be strict, and the regulations of such a character as to render the practice of soliciting Patents difficult, and sometimes tedious; but it must be remembered that these strict rules and regulations have been established, and are enforced, for the purpose, mainly, of checking the practices of solicitors of the class to which we have referred.

It is not pretended, either, that our Patent laws or the administration of the Patent Office are perfect. From time to time, new laws are demanded to meet unforeseen contingencies, and new Patent Office

regulations to meet such new difficulties as may present themselves. Better facilities could, it is believed, be afforded for the prompt prosecution of applications, and a greater uniformity of practice might be secured; but, in spite of sundry defects, it is difficult to understand how a *bona fide* inventor who is in good hands can fail to secure all the rights to which he is entitled.

There is one way to set the public right as to the true condition and management of the Patent Office; and that is by the appointment of a congressional committee of investigation, which would derive its information from sources certain to develop the truth.

Such a committee, after finishing its labors, would, it is believed, come to the conclusion that most of the complaints which we see in print are unfounded, and that, where difficulties occur, their source will, in the majority of cases, be found outside of the office, and not inside. (And probably one of the first remedial measures

which the committee would suggest would be a law to compel every Patent solicitor to pass an official examination as to his competency to fulfil the duties which he has assumed.

THE CRY AGAINST PATENTS  
AND INVENTORS.

As I have said before, the highest average of manufacturers' profits on the production of patented articles is fifteen per cent ; and, the sooner our Western farmers know this, the better. Let the truth prevail on this subject, and we shall have no more exhibitions of petty jealousies between different sections of the country, no more crude attempts at Patent law tinkering, intended for the advantage of one class at the expense of another, but which, if permitted to become the law of the land, must be disastrous to both.

If there is one class of our community which is more indebted to our Patent System, and more interested in its maintenance, than another, it is our Western farmers.

But for the rapid progress in the useful arts, due mainly to that system, the vast tracts of cultivated country in the West would have remained the home of the buffalo and the savage. Let any farmer who is old enough to remember the appliances of thirty years ago, compare them with those with which his farm has been stocked at such wonderfully low prices ; let him look at the comforts of his home, the many cheap accessories beyond his reach, nay, beyond his conception, thirty years before ; and then let him remember that all these labor-saving appliances, all these household comforts, owe their birth to the encouragement which our Patent System holds out to the inventor.

I think I hear a short-sighted farmer saying, "Well, we should have had the things anyhow, Patents, or no Patents." Don't believe it. Men do not act without motives. They do not invent without incentives. They may have passing ideas on improvements,

hasty, evanescent conceptions ; but they will not, without prospect of remuneration, devote their time and thought to that development and permanent embodiment of their ideas, without which they are of no avail.

Others may say (and I hope, for the sake of the country at large, that they are very few), " Well, we have inventions enough, and I am satisfied to go on as I am ; and my children ought to be satisfied." This was substantially the exclamation of the legislator in Holland a few years ago, — a legislator who successfully advocated the abolition of Patents in that country, and who declared that " it might be well enough for such crude countries as the United States and England to encourage invention by the grant of Patents ; but, when they arrived at the state of perfection reached by Holland, there would be no further necessity for such government encouragement."

Well, the Hollanders abolished their Patent laws ; and I

must say they were bad enough to deserve abolition : but what are the consequences ? The legislators of that country are now contemplating the framing a new and more liberal Patent law.

No members of the community have more to expect from Patents in future than our Western farmers. They are crying out for increased facilities for gathering and transporting their crops. They want cheap appliances, cheap comforts, and more of them. From whom have they to expect these things ? From inventors whom the law encourages ; from the enterprise which always accompanies, and is inseparable from invention ; from manufacturing rivalry which is based on Patents, and which always has resulted, and always must result, in economy of production.

The farmers must not forget the disastrous effect which Mr. Sayler's proposition would have in a monetary point of view. The Honorable Commissioner of Patents told us in

his speech before the United States Patent Association, that "nine-tenths of all the money invested in manufacturing in the United States is so invested, because of the security which is given to the investment by Patents." If Mr. Sayler's revolutionary notions are to prevail, the millions invested in Patent property would be in jeopardy. Then would ensue financial consternation, and a panic, compared with which that through which we have not yet passed would be trifling. As a matter of course, the result of all this would be universal distress among the artisans, and certainly among the farmers, who would be among the first to cry out, "Give us back our Patent System!" Legislators may laugh at all this as an exaggeration; but let them search for the facts in this or any other manufacturing city in the Union, and they will soon find how disastrous to the whole community would be a legislative wounding of the alliance between Patents and manufactures.

I would say to the Western farmers, Do not impair Patent property, do not degrade invention by obstructive laws, do not kill the goose that lays the golden eggs.

Dispense with your middlemen, your non-producers, who insist upon being the costly mediums of transfer between the manufacturers and yourselves: these are the men to attack, not inventors, the mainstays of manufacturers, the economizers of manufactures.

I do not pretend to say that our Patent System is perfect. There are defects of administration due to the unforeseen growth of the demands upon the system; and the question of the proper remedies for these defects demand careful legislative deliberation; but the legislators who could make the mistakes we have referred to above are not the men from whom we can expect salutary remedial measures.

The integrity of our Patent System must be preserved from the undermining, ruinous

attacks of short-sighted legislators, if we desire to maintain the proud position which we now occupy as regards manu-

faturing interests, if we wish our progress in the useful arts in future to make strides as rapid as in the past.









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